MOSAICS IN THE MEDIEVAL WORLD

From Late Antiquity to the Fifteenth Century

In this book, Liz James offers a comprehensive history of wall mosaics produced in the European and Islamic Middle Ages. Taking into account a wide range of issues, including style and iconography, technique and material, function and patronage, she examines mosaics within their historical context. She asks why mosaic was such a popular medium and considers how mosaics work as historical 'documents' that tell us about attitudes and beliefs in the medieval world. The book is divided into two sections. Part I explores the technical aspects of mosaics, including glass production, labour and materials, and costs. In Part II, James provides a chronological history of mosaics, charting the low and high points of mosaic art up until its abrupt end in the late Middle Ages. Written in a clear and engaging style, her book will serve as an essential resource for scholars and students of medieval mosaics.

Liz James is a Byzantine art historian with a train-spotter mentality for mosaics. Her ambition is to see at first hand all the mosaics discussed in this book: she reckons she is about three-quarters of the way there. Professionally, she is Professor of Art History at the University of Sussex where she teaches courses on Byzantine art.

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LIZ JAMES
University of Sussex

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For George and Alex, and for Sharon

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I think we're there now, though there may be some new mosaics to add in!

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A NOTE ON NAMES

I HAVE BEEN CONSISTENTLY inconsistent in my use of names. I have mixed modern and ancient, Italian and English, Greek and Latin, but I have aimed to use a name under which an area, a building or a person might be familiar to the reader.

ABBREVIATIONS

ActaNorv	*Acta ad archaeologiam et artium historiam pertinentia, Institutum Romanum Norvegiae*
AISCOM	*Atti del Colloquio dell'Associazione italiana per lo studio e la conservazione del mosaico*
Andaloro/Romano A1	M. Andaloro and S. Romano, *La pittura medievale a Roma 312–1431, Corpus e Atlante*: M. Andaloro, *Vaticano, Suburbio, Rione Monte, Atlante*, vol. 1 (Milan, 2006)
Andaloro/Romano C1	M. Andaloro and S. Romano, *La pittura medievale a Roma 312–1431, Corpus e Atlante*: M. Andaloro, *L'orizzonte tardoantico e le nuove immagini 312–468, Corpus*, vol. 1 (Milan, 2006)
Andaloro/Romano C4	M. Andaloro and S. Romano, *La pittura medievale a Roma 312–1431, Corpus e Atlante*: S. Romano, *Riforma e tradizione 1050–1198, Corpus*, vol. 4 (Milan, 2006)
Andaloro/Romano C5	M. Andaloro and S. Romano, *La pittura medievale a Roma 312–1431, Corpus e Atlante*: S. Romano, *Il Ducente e la cultura gotica 1198–1287, Corpus*, vol. 5 (Rome, 2012)
CahArch	*Cahiers archéologiques*
DOP	*Dumbarton Oaks Papers*

EHB	A. Laiou (ed.), *The Economic History of Byzantium: From the Seventh through the Fifteenth Century* (Washington, DC, 2002)
LP	*Liber Pontificalis: Le Liber Pontificalis, texte, introduction et commentaire par L. Duchesne* (Paris, 1955–57) and the three volumes of translation by R. Davis: *The Book of Pontiffs (Liber Pontificalis): The Ancient Biographies of the First Ninety Roman Bishops to AD 715* (Liverpool, 1989); *The Lives of the Eighth-century Popes (Liber Pontificalis): The Ancient Biographies of Nine Popes from AD 715 to AD 817* (Liverpool, 1992); *The Lives of the Ninth-century Popes (Liber Pontificalis): The Ancient Biographies of Ten Popes from AD 817–891* (Liverpool, 1995)
PG	J.-P. Migne (ed.), *Patrologiae cursus completus, Series Graeca*, 161 vols. in 166 parts (Paris, 1857–66)
PL	J.-P. Migne (ed.), *Patrologiae cursus completus, Series Latina*, 221 vols. in 222 parts (Paris, 1844–80)
RACAR	*Revue d'art canadienne/Canadian Art Review*

INTRODUCTION: MOSAICS MATTER

In the middle of a golden hemisphere, a crucified Christ hangs against a black cross filled with doves and rising out of a mass of acanthus leaves (Fig. 1). This central image is almost concealed in a wealth of vine scrolling that curls its way across the vault in ordered, rhythmic rows, five across and five down. Buried in these vines are other plants, animals, birds and even figures: four seated Church Fathers, pens in hand; men feeding birds; little putti climbing the tendrils or riding dolphins. Either side of the cross stand Mary and St John the Evangelist, seemingly held in place by thorny tendrils. Above the cross, a hand bearing a wreath descends amid fluffy red and blue clouds from a tightly stretched canopy crowned by a small gold cross and then a monogram, the Chi-Rho for Christ, with the letters Alpha and Omega, signalling his role as the beginning and the end of all things. Along the bottom, deer drink from water flowing from the acanthus at the foot of the cross, a woman feeds hens, a man herds cattle. Below them twelve sheep emerge, six and six, from the building-filled, jewel-encrusted cities of Bethlehem and Jerusalem, making for a centrally positioned Lamb. The whole image is framed by an inscription, gold letters on a blue background, that hails the Church itself as the True Vine. Above and to each side are further mosaics on the triumphal arch: prophets; Saints Peter and Paul conversing with Saints Laurence and Clement; and at the centre, a majestic Christ in glory, amid yet more blue and red clouds and flanked by the symbols of his evangelists, blesses the church, the image and those below.

This mosaic in the apse of the church of S. Clemente in Rome is one of the largest and most spectacular, complicated and visually stunning works of art that survive from the Middle Ages, yet what we understand for certain about it could



Figure 1 Apse mosaic, S. Clemente, Rome, early twelfth century.

be written on a postcard. It is likely to have been installed in the early twelfth century when the church was built; it was presumably a part of the patronage of the church's builder, one Cardinal Anastasius, of whom little more is known. Its artist or artists have never been identified; where the materials for its manufacture, glass, stone, mother-of-pearl, came from is unknown; how it was put together is a mystery. Even the meanings of the elaborate, multifaceted, intertwined images are a matter of debate. What this mosaic is doing in this church at this point in time, and why, we can only speculate.

It is these conjectures that provide the basis for this book: how and where mosaics were made, why they might have been made, the materials, time and costs involved, and what people in the medieval world saw in them. Mosaics are the most beautiful, elaborate, complex and probably supremely expensive form of wall and vault decoration used in the medieval world. They survive from churches, mosques and palaces across the Mediterranean world from Spain, Italy and Greece in the west, to Syria and Israel in the east, taking in the Ukraine and Georgia to the north and Egypt to the south. And they are big, monumental art on a vast scale. But the stories of medieval wall mosaics are patchy and relatively little discussed. Considering their scale, they have played a comparatively minor part in the history of medieval art; considering their value and their costs, an even smaller role in our understanding of the medieval world. In this book, I have aimed to treat mosaics as indicators of history, woven in as a part of history, rather than passive illustrations of the past. As this book argues, they are a source material in themselves, employing a visual language that spoke powerfully and

influentially to the world in which they existed. Their eloquence lay not only in the identity of the image, but also in what it was made from, where it was, who caused it to be made, how it was understood and perceived. My view has been that mosaics mattered in the medieval world, not just as an art form but also as a very visible and often hugely public demonstration of piety, authority, prestige and money. Whilst the mosaics of major religious foundations such as Old St Peter's in Rome, the Great Mosque in Damascus or Hagia Sophia in Constantinople reveal political and dogmatic power games, the mosaics found in lesser buildings such as the diminutive church of Hosios David in Thessaloniki with its anonymous patron or the small Oratory at Germigny-des-Prés can also speak to the same effect.

To explore the use and potential of the medium, this book comes at mosaics from two angles. One is the technical aspect, the actual mosaic and what we can say about that; the other is a consideration of the place of mosaic, and of specific mosaics, in the society in which they were made. Part I explores what we know or can deduce about the actual physical making of mosaics from the mosaics themselves.[1] What do we know about the glass that mosaics were made from? What do we know about the logistics of mosaic-making? How much did mosaics cost? Do we know anything about their makers? It turns out that we know a surprising amount about both the technology used in making the materials for mosaics and the procedures for making them. This not only tells us about the sources and dispersal of materials and methods of construction but also informs the way we perceive and respond to them. But the relationships between centres of production in terms of materials, styles, techniques, iconography and artists are far less clear cut and therefore more interesting and complex than is often assumed. One goal of Part I is to establish just how expensive mosaic was as a medium and consequently to offer some clues as to the level of resources that a patron needed to install a mosaic. By and large, mosaic really was costly in the Middle Ages, and that suggests that it was also prestigious.

Part II looks at mosaics across a long time span, *c.* 300 to *c.* 1500, in an attempt to bring the range of mosaics together in one place and to see what a survey history, with all the drawbacks inherent in such a broad-brush study which smooths out so much detail, might indicate about the use of the medium. I have divided the time span into century or double century blocks, as a way of structuring this huge body of material, though it is an arrangement that provides its own problems because some mosaics are undated and others straddle more than one century. What this synthesis does show, however, is the astonishingly wide spread of mosaics across the Mediterranean world. It makes it apparent that there was more mosaic than has hitherto been realised. Part II also treats mosaics as products of cognitive choices made for a multitude of reasons relating in part to the socio-political contexts of the worlds in which their patrons operated. The basic question I have sought to answer in this section is: why did people choose mosaic for this building here and now? Mosaic was not the only medium employed in the medieval world to decorate walls and ceilings – paint, textiles, sculpture were some of the alternatives available – so what was special about mosaic?

So I will consider mosaics as snapshots of moments where people made deliberate choices about commissioning art, about spending money and about making public statements. What do these instances tell us? What statements were being made? Why did popes, caliphs and emperors choose in some instances to commission mosaic? And what of the humbler patrons? And what might all that suggest about networks between people, about trade and communications, about conflicts of ideas and beliefs, about

appropriation and reuse? The messages given by mosaics are not just those of the patrons, though this is where I have tended to focus. We should also ask, even if we cannot answer, how mosaics may have been received by their audiences, how they fitted into their buildings and cities, and we should recognise that the messages of mosaics changed over time, even to the point of becoming irrelevant and the mosaic destroyed.

The book seeks to decipher these questions in a context in which little is known about medieval wall mosaics. No contracts exist for mosaic-making until the fourteenth century, when such documents survive about the making of the façade mosaic at Orvieto Cathedral in Italy; almost no mosaics (at least until the twelfth century and the Church of the Nativity in Bethlehem) are signed or associated with any artists; and written sources may identify a patron or state in whose reign (imperial, papal or caliphal) a mosaic was made, but are rarely more precise. No source tells us how mosaics were made or where the materials came from or what they cost; no medieval author really gives us much information on how mosaics were received by their audiences; no patron has left us an explanation of why he or she commissioned *this* mosaic looking like *this*. In the case of the church at Daphni in Greece, where one of the most beautiful and full programmes of mosaic decoration survives, there is no information about the dedication of the church (perhaps to the Mother of God), its function (it may have been a monastery), its patron (all we know is that he or she could afford to build a church and decorate it with mosaics), its artist (no idea) or even the date of the mosaics (the church itself may be eleventh century in terms of the architecture; the mosaics have been dated widely between the tenth and twelfth centuries). All that we know about mosaics tends to be concentrated within the mosaic itself.

But why is so little known about mosaics? There are various reasons. Most surviving mosaics are on the walls of churches, and for many of those churches full surveys do not exist. There are, for example, some very thorough studies of the mosaics of Torcello, of the church of San Marco in Venice, of the mosaics of twelfth-century Sicily, and there is an excellent study of the mosaics of the Eufrasian Basilica in Poreč. There is a very good book-length study of Nea Moni on Chios, an admirable slim guide to Hosios Loukas, but next to nothing since about 1899 on Daphni.[2] Many more of these individual studies are needed. There are also some broader surveys of mosaics covering a wider time period, including mosaics from Thessaloniki, Rome and Ravenna, but again these tend to consider these mosaics in relative isolation, as mosaics in Ravenna, rather than in the context of surviving sixth-century mosaics more widely.[3] Often as well studies of mosaics can be somewhat detached from their physical settings, with emphasis placed on their appearance and meaning rather than on pragmatic information about size, surface area and relative proportions of materials. The physical nature of wall mosaics has not always been presented as the fundamental part of understanding a mosaic that it is.[4] Only detailed study from the scaffold really allows for cogent remarks about style and also about the making of the mosaics, and such work other than at Ravenna is in short supply.[5] Analysing the setting of mosaics, and so recording appearance, restorations, possible patterns and sequencing of laying demands both scaffolding and specialised knowledge. And mosaics seem to fall into so many cracks: are they a part of the building's fabric (and hence architecture) or of its fixtures and fittings (and so decoration)? Are they Byzantine or Western medieval or Islamic? Are they a major or a minor art form, an art or a craft?

Another fundamental problem with many wall mosaics is that of their dating. Not many mosaics have an absolute date that can be accepted without question. A reasonable number are dated on

the supposition that they were installed at the time the building they grace was built, though this is not always the case, and understanding the dating of a building is not always as straightforward as it might be. For example, the Church of the Holy Apostles in Thessaloniki is dated by three inscriptions within it that claim it was constructed through the patronage of Patriarch Niphon (1310–14); dendrochronology suggested that the church was built all of a piece and dated it to 1329 or just after, some fifteen years after Niphon's removal from office. On one level, at least the dates are in the same century, but, on another, this has caused considerable debate because the mosaics in the church strongly resemble those in the Church of the Chora in Constantinople, built between 1316 and 1321: should the Salonikan mosaics therefore be dated before or after those of the Chora, a question with implications for understanding mosaicists working in the fourteenth century? In the case of S. Marco in Venice, the church itself was built in the eleventh century, but a very good case can be made that the mosaics were installed over a long period from then on, down into the present day in fact. Some mosaics are associated by texts with particular patrons, especially imperial or papal patrons, and so can, presumably, be dated to that patron's lifetime or time as pope or emperor; patrons are sometimes identified within the mosaics themselves and consequently we suppose that the mosaic reflects an act of patronage from a living person – but this need not always have been the case, as the thirteenth-century apse mosaic of S. Maria Maggiore in Rome warns us. This was the commission of Pope Nicholas IV, who is depicted in the mosaic, but it was almost certainly completed after his death. But critically, many mosaics are undated and there is no consensus as to their date. So, for example, the stunningly beautiful and lavish mosaic programme of the Rotunda in Thessaloniki has been dated to several points between the fourth and seventh centuries, with a general feeling that it might be fourth century; a small, slightly scruffy mosaic from Durrës in Albania has been dated to the fifth century on the basis of its style and the eighth to eleventh centuries on the basis of the sequencing of layers of plaster, paint and mosaic on the wall.[6]

Another basic problem is that we do not have much sense of the extent and spread of mosaic as a medium in the medieval world. This book looks to counteract that by providing a series of maps that plot the growth and spread of mosaics over time. The lists and details of the mosaics plotted on the maps are drawn from my database of medieval wall and vault mosaics.[7] At the point at which I am writing now, it tracks over 380 mosaics for which physical evidence survives. (Details of all these can be found in the Appendix.) These can be supplemented by a number of additional mosaics mentioned by textual sources (though these have not been mapped here). But the data presented here is inevitably incomplete. I have had to make decisions about where to date many mosaics. Some mosaics will have been missed, and there is no way of knowing how the number of the mosaics recorded in the database relates to the total number made. Certainly what survives is not all there was; this is the tip of an iceberg whose overall size is unknown. Chance of survival is another factor. Many more mosaics survive on walls from Western medieval Europe than from Byzantium (from Italy than from Asia Minor), and that owes something to the use and continued existence of churches in the two regions. On the other hand, much more archaeological data, in the form of scattered tesserae or mosaic fragments, is available for wall mosaics from the eastern part of the Mediterranean than from the western, and this may well reflect the emphases of Christian archaeologists in the Holy Land. In other words, this book inevitably makes assumptions based on incomplete data and the preserved

material presents the trap of the norm: the belief that, because it survives, it represents the usual rather than the exceptional, and that patterns and developments can and should be traced between mosaics.[8] As will become apparent, scholars have often drawn on what survives to create patterns of meaning, and material that does not fit into their theories has been overlooked or omitted. My belief is that we have lost too much to be able to draw many telling connections between surviving mosaics across the Mediterranean world. Consequently, I have looked instead to understand each mosaic in its own terms, at a local level, within its own building and society, rather than to make relationships and create narratives and answers where none might exist. Nevertheless, at times the temptation has been too great and I have also created a general narrative in which mosaic as a medium stood for something in the medieval world.

PROBLEMS WITH MEDIEVAL MOSAICS AND 'BYZANTINE' STYLE

The study of medieval wall mosaics has frequently been dominated by the analysis of their style. 'Style' essentially refers to the way in which a picture is created by an artist, partly how the medium is used and partly how the figures shown are constructed. Traditionally it is assumed that artists have individual methods of constructing the details of an image, the ears or hands or the draperies, for example, and these, coupled with the ways in which figures are conceived, the use of line and colour, and even the nature of individual brushstrokes, have been seen as ways to decipher the distinctive individual styles and detectable choices made by artists. It is a methodology largely developed for painting. It can be effective in spotting the differences between an image painted by two named artists where there is a body of work known through external evidence to have been produced by those artists, because identifiable comparative data exists. In the case of mosaics, stylistic analyses tend to begin from the premise that apparent differences within mosaics mean different artists potentially working at different times and very detailed descriptions of individual mosaics have been produced to make this point within the same building, as well as to allow comparisons to be drawn across monuments in a bid to establish artistic influences between mosaics and to produce temporal sequences for their making.

It is considerably more difficult to do this with a whole series of medieval mosaics where the media involved (cubes of glass and stone) and the techniques of making are completely different, and where there are fundamental questions about the date, the number of people involved in working on a mosaic at any one time, or over a period of time, and the question of whether the same person designed the mosaic and also stuck the tesserae into it. Nonetheless, much of the literature about mosaics has been written in these terms. This has much to do with the paucity of studies within Byzantine art, and the even shorter supply of work on mosaics outside of Byzantine Studies, which means that scholarship from the 1900s to the 1960s still resonates and still has to be engaged with. Although there is a definite shift in recent research, the study of mosaics is still stranded somewhere between current art historical concerns with the social history of art and the concept of visual culture and the concerns of previous generations which were primarily grappling with questions about how to define mosaics and how to attribute them to a particular set of makers, particularly within a system that gave primacy in medieval art to Byzantine art. Because these are key issues for understanding the history of mosaic, it seemed advisable to rehearse now the problems that the emphasis on stylistic analysis coupled with beliefs about

Byzantine artistic supremacy have presented in the study of wall mosaics.

Medieval mosaic has been and is still regularly presented first and foremost as a Byzantine art form. 'We cannot say with certainty where this artist [of the mosaic at St Catherine's Monastery on Mount Sinai] came from, but there is a high degree of probability that he came from Constantinople, first of all because the capital had a world-wide fame with regard to its mosaic workshops, whose artists had been called to Damascus, Toledo, Kiev, Norman Sicily, Venice and other places wherever an ambitious project of mosaic decoration was commissioned.'[9] Because the mosaics of Hosios Loukas were perceived as the least provincial of the eleventh-century mosaics in Greece, they had employed the best artists from Constantinople, working in the 'best spirit'.[10] 'Glass mosaic was a luxurious medium of decoration around the Mediterranean in regions that either belonged to or were influenced by Byzantine artistic traditions.'[11] Wall mosaics outside the Byzantine empire are vital for reconstructing the 'lost production of mosaics carried out in the capital by workshops active in the same period' for these were responsible for spreading through the Mediterranean what was regarded as a 'national art'.[12] 'The difference [in the phases of decoration in the Church of the Nativity in Bethlehem] is best defined on a scale measuring the level of intensity with which the Byzantine influence was adopted and applied: the wall mosaics show the highest degree of byzantinization, clearly indicating that Byzantine artists from imperial centres were directly involved in their making. No doubt this involvement strengthened the already extant inclination towards byzantinization of local artists of Eastern origin . . . Traces of close cooperation between Byzantine and local artists can be followed throughout the whole cycle of mosaics in Bethlehem.'[13] There are Eastern and Western manuscripts or wall paintings or textiles, but over and again scholars assert that there are only Byzantine mosaics. It was indeed a view of mosaics that was my initial starting point in thinking about this book: my original opening ran something like 'Byzantine mosaics were the most beautiful, elaborate, complex and probably most expensive form of wall decoration used in the medieval world.'

Both as a result of these assumptions and as a way of bolstering them, stylistic analyses of mosaics revolve around revealing the Byzantine nature present within them. So, for example, Otto Demus offered a very detailed account of a large mosaic panel in S. Marco depicting Christ's Agony in the Garden, which he dated to the thirteenth century (Figs. 2 and 3). In it, he detected at least four different styles present in the panel; he ascribed these to the work or the hands of at least four different artists (plus assistants), all operating at slightly different levels of mastery. For Demus, the changes in style were indicative of the process and hierarchy of mosaic-making: work was begun by a 'Greek' master from Byzantium who laid out the panel, followed by a second master, who was perhaps a 'young Venetian only recently schooled in the technique of mosaic'. After this came the efforts of a workshop of two more mosaicists in a style that was in all its aspects a development of the style of the first master, but at a temporal remove (it is unclear why the first two mosaicists are labelled 'masters' and the other pair as a 'workshop', but the implication is one of quality).[14] Demus also offered a rationale for these changes in hands, suggesting that since the style of the fragments of the surviving thirteenth-century mosaics from S. Paolo *fuori le mura* in Rome matches those of the S. Marco panel, the first master was summoned to Rome to work at S. Paulo and was followed there by the second. In this way, the S. Paolo mosaics, which have a firm date, are used to provide a date for the S. Marco panel.[15] The scene in



Figure 2 Christ waking the apostles, from the Agony in the Garden, south transept, S. Marco, Venice, twelfth century. Demus attributes this part of the panel to the 'second master', the 'young gifted' artist.

Figure 2 of the standing Christ with the apostles shows work of the 'Greek' master, possibly responsible for the figure in profile at the top, and the 'young Venetian', who made the figure of Christ and the three apostles, the wall and parts of the rocky landscape.[16] In contrast, Figure 3 is part of the work of the 'workshop' of two mosaicists, though in this section, according to Demus, only differences of execution, not of style, are apparent.

In terms of distinguishing between these masters, it all comes down to details. The standing Christ in Figure 2 is said to be clearly by the same hand as the three apostles visible in this image, for all share the same generic character, the same palette, the same 'hard and flat' modelling, but the figure of Christ is superior to the others for it has a 'monumental grandeur of stance and gesture'. In its making, however, are details that suggest that the artist was gradually 'becoming familiar with the technique of mosaic-making in general'. The kneeling Christ and the standing Christ of Figure 3 (both from the 'workshop') can be differentiated from the standing Christ of Figure 2 because 'the modelling is much softer and more differentiated: the flatness is replaced by a carefully shaded relief'. The first master, the 'Greek', and the second master, the 'young Venetian', can be distinguished through details: 'the pattern of the medium-brown hair and beard is a little coarse, the design of the hand somewhat clumsy; the shadows in the face are heavier' in the 'Venetian' than in the 'Byzantine' work.[17] Elsewhere, in terms of its style, Byzantine mosaic work has been characterised as not coarse or crude; it can share a classical idea of statuesqueness; it is picturesque in its composition, refined in its colouring, developed in its feeling for the organic.[18] On the other hand, less positively, it has been called 'abstract' and 'anti-naturalistic', typified by the repeated use of static, large-eyed holy figures.

These are very detailed interpretations of the mosaics (probably through using photographs as well as first-hand observations), relying on the observation of minutiae and on the interpretation of those niceties, and the conclusions drawn from both. They are readings that present a great many questions now that were not seen as problematic for art historians trained and working in most of the twentieth century. First, over time, (subjective) observations and interpretations become (objective) facts. The two masters and the workshop posited for the creation of the panel suddenly become real and an indication of actual artistic practice on which further discussion is founded. But, even if Demus' four different hands and the similarities with the S. Paolo mosaics are apparent (and that's a question in



Figure 3 Christ praying and Christ confronting Peter, from the Agony in the Garden, south transept, S. Marco, Venice, twelfth century. The picture shows about half of the panel, which is 12.4 metres. Otto Demus argued that evidence for perhaps four separate artists, at different levels of competence, could be detected in the panel.

itself), do these visual shifts actually mean what he suggested? Do they indicate changes of mosaicists and establish that this one panel was made over a period of six years? How do we know, instead, that it was not a change of mind on the part of the artist or a response to a change in available materials, or a change of surface, or a reaction to the particular location of an image within a building and its viewing point, or even later restorations and repairs? Was it made by a lot of people very quickly? Did artists work in such a way that the minutiae reveal individuals? It may perhaps be true for painting (though that is another story) but mosaic is a very different medium, used in a very different way. Not enough is known about working practices to be sure whether the differences in style that art historians detect reflect different artists from different traditions or artists from the same team or workshop, or how far they reflect different levels of expertise or indicate technical shifts on the part of the same mosaicist, the break in a day's work for example, the short cut taken in an area of mosaic where it would not be seen, a fresh bucket of tesserae, a shift in the scaffold, just plain boredom and a desire to vary the monotony. And within these readings lurks another assumption, which is that artists worked only in one detectable style. But this ignores the fact that apparently changing styles and apparently changing hands may reflect the ability of the same artist to work in a variety of ways: Filippino Lippi worked in both

an austere and an ornate style in the 1490s, serving clients who were pro- and anti-Savonarola; El Greco produced art that looked Byzantine, Venetian and then distinctively his own.

Second, there are unspoken issues round definitions and distinctions. Demus tended to use 'Byzantine' and 'Greek' almost interchangeably.[19] But he did not explain what he meant by these, and neither had any real meaning in the Middle Ages. The Byzantines themselves did not define themselves as 'Byzantine' (a nineteenth-century label) or 'Greek'. They tended to call themselves Romans and a central part of their self-definition was in relation to the Roman Empire.[20] So was Demus imagining that the twelfth-century 'Greek' mosaicist of the Gethsemane panel was a man who lived, was trained and worked somewhere in the lands ruled by the Byzantine emperor? Was he Orthodox in his faith? Greek-speaking? And beyond S. Marco and its mosaicists, how should we understand the term 'Byzantine'? Would a fifth-century mosaicist born, raised and trained in Antioch, with Syriac as a first language and Monophysite Christianity as his professed creed, count as either 'Byzantine' or 'Greek'? What about a sixth-century Visigoth from Ravenna, Latin-speaking, but trained in Constantinople and professing Orthodoxy? If the artists of the twelfth-century Sicilian mosaics came from Greek-speaking south Italy, did that make them 'Byzantine' or 'Greek' or neither? Was Ephraim the monk, named in Greek and Latin as the artist of the twelfth-century mosaics in the Church of the Nativity in Bethlehem, Greek or Syrian or Constantinopolitan or Byzantine? What of Basilius, his fellow-mosaicist in the church, named in inscriptions in Greek, Latin and Syriac? In mosaic terms generally, the term 'Byzantine' has been used of (imagined) artists very loosely, with a lack of distinction between presumed ethnicity, nationality (an anachronistic concept in any case) and the physical location of a mosaic, and overlooking that individuals can and did simultaneously occupy more than one position in society.[21] These labels are divisive in a way not relevant to the Middle Ages and are simply not helpful.

A third problem relates to the association made between style and Byzantium, and that is in the implicit assumption regularly made that those elements of style defined as Byzantine are better than those not defined as Byzantine (or vice versa, that those elements of style defined as good then came to be perceived as Byzantine). This both leads to and is informed by the belief that Byzantine mosaicists were superior in skill and travelled the Mediterranean taking this expertise with them and teaching it to the less able natives. Time and again, the best mosaics are supposedly the work of the Byzantine masters, the less good are those of locals ('Romans', 'Sicilians', 'Venetians' and 'Syrians' to name but a few) trained by Byzantines and the poorest are the work of non-Byzantine-influenced local artists. And repeatedly, mosaics made outside the Byzantine Empire are ascribed to Byzantine artists. The mosaics of both Pope John VII's Oratory and of Pope Paschal's S. Prassede and its Zeno Chapel have been defined as the work of 'Greek' or 'Byzantine' artists working in a proto-Byzantine tradition and producing art for a 'Greek' pope.[22] In Rome, further Byzantine influences are apparently present in the mosaics of S. Paolo *fuori le mura*, said to be the work of either Constantinopolitan craftsmen completing and modifying a Roman design, or Roman artists operating with Byzantine inflections; at the Sancta Sanctorum chapel in the Lateran, it is claimed that the craftsmen actually were Byzantine.[23] Similarly, Nicholas IV's use of mosaic in Rome is supposedly a direct consequence of his time spent in Constantinople because the mosaics of S. Maria Maggiore (and of S. Maria in Trastevere) do not 'look Roman'.[24]

Cavallini's mosaics in the apse of S. Maria in Trastevere with their 'Palaeologan colorism' demonstrate that he received his training 'in the orbit of a Byzantine workshop' and was all the better for it.[25] In Andrea Dandolo's Zen Chapel in S. Marco, Venice, the 'perfect Palaeologan technique' of one mosaic panel apparently 'proves the presence of Byzantine craftsmen in Venice'.

And this argument helped to close the circle, for once the belief in Byzantine artists was established among art historians, it was a short step to using them as another tool for tricky dating problems. The logic tends to be that such mosaicists could only have been active at times when the great powers were on reasonably good or reasonably bad terms. Conveniently, Pope Paschal's 'Byzantine' artists at S. Prassede fled to Rome from persecution during the period of Byzantine Iconoclasm. In S. Marco in Venice, work on the mosaics of the eleventh and twelfth centuries is said to have been undertaken particularly at times when Veneto-Byzantine relations were favourable, enabling Byzantium to supply mosaicists to Venice.[26] There was also, it is claimed, an influx of Constantinopolitan mosaicists fleeing to Venice from the Venetian Sack of Constantinople.[27] In the study of Islamic mosaics, the supposed presence of Byzantine artists at the Great Mosque in Damascus, for example, has been taken to indicate both good relations between the powers (a proof that trade continued even though the two states were at war) and bad (that they were 'Byzantine' mosaicists indicated the superiority of the caliph, able to compel the emperor to fulfil his behest).

But for no surviving mosaic is there any evidence of a Byzantine artist – outside of the appearance of the mosaic itself and how its style might be defined.[28] No mosaic is signed by anyone definitively known to have come from the Byzantine Empire; no text associates a 'Byzantine' artist with a mosaic; the only names of mosaic artists that survive are from the twelfth and thirteenth centuries, and from Italy. And, as a tool for establishing dates and sequences of mosaics, 'style' has yet to date definitively and uncontroversially any mosaic (as the second part of this book will indicate). For instance, a detached mosaic panel depicting the Presentation of Christ was found in the excavations and survey of the Kalenderhane Camii in Istanbul. Originally, on the basis of its style, through a comparison with the surviving mosaics from the Oratory of Pope John VII (705–7) in Rome, with the mosaics of St Demetrios in Thessaloniki and with the wall paintings of S. Maria Antiqua in Rome, it was dated to anywhere in the late sixth to the very early eighth centuries, with a preference for the seventh century. The archaeology of the excavations and the sequencing of the construction of the church indicate a date in the reign of Justin II (565–74).[29]

The dominance of ideas about 'Byzantine style', 'Byzantine artists' and 'Byzantine superiority' in the study of mosaics has affected the ways in which mosaics like the apse mosaic of S. Clemente have been considered. Because very little about S. Clemente looks 'Byzantine', it has been fitted into a model that suggests that mosaic-making had died out in Italy by the eleventh century, had been reintroduced from Byzantium, and was taken to Rome where it was turned from a 'Byzantine' art form into a 'medieval' one in the form of S. Clemente. Since the mosaic is thus taken out of the 'Byzantine paradigm', and indeed seen implicitly as inferior, it has a far smaller place in discussions of twelfth-century mosaics than those of Sicily, say, where the 'Byzantine' associations are felt to be far more apparent.[30] But S. Clemente also tends not to feature in discussions of Western medieval art because it is a mosaic, and mosaic is, as everyone knows, Byzantine. Opening this book with S. Clemente might therefore be seen as a perverse choice. But it encapsulates certain key questions. It challenges those assumptions of mosaic as a Byzantine art form, of mosaicists

as Byzantine, as quality in mosaic art as coming from Byzantium. My argument throughout this book is that mosaics cannot and should not be defined as 'Byzantine' (because that term is problematic in itself) and that their presence is no indicator in and of itself of any association with the Byzantine Empire. If a mosaic is to be defined as 'Byzantine' or having an association with the Byzantine Empire, then evidence needs to exist for that relationship, evidence beyond the use of the medium itself. At no time was the making of mosaics the automatic result of 'Byzantine artistic traditions', the Byzantines did not spread mosaic-making through the Mediterranean, and Byzantine artists were not necessarily involved in every mosaics project in the Middle Ages. Rather, the story is much more complex than this implies.

This is not to say that Byzantine artists (by which I mean artists who were based in the Byzantine Empire) were never responsible for mosaics outside of the Byzantine Empire. It is highly likely, since artists in the Middle Ages were very mobile, that Byzantine artists, in various media, were active across the Mediterranean. It is more than probable that Byzantine artists worked on the mosaics of Hagia Sophia in Kiev, for example, since there was no tradition of mosaic-making there prior to the eleventh century and so the mosaicists must have come from somewhere. But it cannot be unthinkingly assumed that the artists of mosaics were inevitably Byzantine or that mosaic was 'Byzantine'. One of the things that the material of Part II indicates is that mosaic-making was widespread and continuous in Italy from the fourth century on; and this implies that the mosaics of Venice, Sicily and Rome may well have been the work of local artists working in an established form of art. Even when we do think that Byzantine mosaicists were active in, say, Kiev or Venice, we should consider how and why those mosaicists might have gone there to work. What were the processes for acquiring and commissioning artists in the Middle Ages? One way might be through the solicitation of one authority to another: a bishop to a bishop (as with Gregory of Nazianzus and Amphilochios in the fourth century) or a pope to a doge (Honorius III to Ziani in the thirteenth century), or even a caliph to an emperor. Another scenario might be one of travelling artists looking for work, perhaps less likely given the scale of a mosaic. One more might be of artists fleeing from one area to another: the relationship between Byzantium and Venice might allow this. Is there a case to be made that patrons chose artists because they liked their work, because it was fashionable at the time, because that artist was cheap or available or even exclusive and expensive, or because someone else very important had already employed them? And there is the trap of presuming that influences were always from the East to the West. The assertion of superior Byzantine quality in the case of mosaics is associated with the supposed given superiority of Byzantine medieval art over Western medieval art, coupled to a belief that the medieval West was a passive receptor of imagery, styles and techniques learnt from the East. As the example of the Gethsemane panel indicated, Byzantine elements in Western mosaics are upheld as the result of the lesser copying the better. But in the West, Byzantium went in and out of fashion.[31] And although some forms of art did move from the East to the West (silks, for example), others, such as enamels, moved from West to East; and Byzantium got the technique of decorated initials in luxury illuminated manuscripts from the West, possibly Italy.[32] How far the West valued Byzantine art for its quality and how far for what it represented, a very different matter (and indeed, vice versa, what the Byzantines valued in Western art), are questions that need frequent reiteration.

In the 'quality' paradigm, geographical models of artistic excellence have often been constructed,

traditional ones of 'centre and periphery', in which the centre (invariably Constantinople in the case of mosaics) controls the best skills, produces the best art because it is the most cosmopolitan place, and exports that art out with its artists in a series of concentric circles. The further away a place is from the centre, the poorer and more provincial its art and its artists.[33] So it is claimed that the artist of the sixth-century apse mosaic at St Catherine's Monastery probably came from Constantinople 'because the capital had a world-wide fame with regard to its mosaic workshops, whose artists had been called to Damascus, Toledo, Kiev, Norman Sicily, Venice and other places wherever an ambitious project of mosaic decoration was commissioned'.[34] In similar vein, the twelfth-century mosaics of the Church of the Nativity in Bethlehem clearly indicate 'that Byzantine artists from imperial centres were directly involved in their making'.[35] In Sicily, the traditional model that Demus makes the case for is that at first Byzantine mosaicists were called in and worked in an 'idiom whose purity became increasingly adulterated', both by the type of architecture employed and by 'a foreign atmosphere of taste'. But things got worse in the second phase when the designers and mosaicists were 'either provincial Greeks or Graeco-Sicilians who used a style evolved probably in the provincial backwaters of Byzantine art'.[36] As this argument constructs it, there were three great sites of artistic production in the Early Byzantine world, Constantinople, Alexandria and Antioch, distinguishable on the basis of the particular artistic styles assigned (by scholars) to each. Art from Antioch was more 'oriental' and that from Alexandria more 'Egyptian' than that from Constantinople, which exemplified the epitome of 'Byzantine'. Fifth- and sixth-century Italy was an intermediary post in the transmission of Byzantine ideas to the West, in which copying from Byzantine art resulted in transmitting only the form of Byzantine art, not its spirit, which only Greek (or Byzantine) artists could convey.[37] The model requires that mosaics and mosaicists from Constantinople are always the best, but those in, say, Kiev or Bethlehem or even Rome and Venice can only be less good because they are further away. It is a concept that has also affected arguments about dating. The mosaics of the small church of Hosios David in Thessaloniki, for example, have been placed by some in the seventh century because they have been perceived as 'Alexandrian' in style and so must have been made by Christian Alexandrian artists fleeing the Muslim invasion of Egypt.[38]

In this context, there are several very obvious questions. The first is whether Constantinople was *the* centre of mosaic excellence throughout its history. The only supporting evidence for this is that there was undoubtedly mosaic in the capital, though little of it survives from which to draw any conclusions. On the other hand, if the existence of mosaics is evidence of the existence of mosaic workshops in a city, then the same case can be made for Rome, Thessaloniki, Ravenna, a host of other cities. It also seems perverse to presume that artists from outside of the Byzantine Empire could not produce mosaics as good as artists from within the empire: the distinction between 'form' and 'spirit' is remarkably opaque. Additionally, it is odd to assume that only artists from Byzantium could produce art that we see as 'Byzantine' in its appearance. In the fifteenth century, Cretan painters could be commissioned to produce icons in *forme alla Latina* or in *forme alla Greca*. This implies both an awareness of differences of style and an ability to switch between styles according to the demands of customers and patrons.[39] Imitation was surely a basic skill and there seems no reason to believe that medieval artists were any less able to adapt to suit their particular audiences than Filippino Lippi or El Greco. It is highly likely that mosaicists, as was the case with artists in other media, learned, borrowed, stole, absorbed,

however one wishes to phrase it, influences from other art and artists: art does not get made in a vacuum. But focusing on style has led to us becoming bogged down in defining formalistic and stylistic rules rather than in analysing the processes used by an artist in making mosaics.

Another issue implicit in the use of style and the automatic application of the term 'Byzantine' to categorize the quality and date of a mosaic is that it implies that patrons and viewers could and did make fine distinctions between styles and their referents, distinctions that were the same as ours. Furthermore, it indicates that such patrons could and did recognise styles as being used to make sophisticated political and ideological points. This suggests that such audiences had a very wide experience of other monuments and their significances, that they both could and did make subtle analyses of details. It also suggests that such details were visible to those looking at mosaics, not automatically the case when most mosaics are located high on church walls or vaults, nor when their viewers were concerned with them less as works of art, perhaps, and more as images for devotion. It is perfectly possible that audiences did have such tools and such desires, but these surely need to be evidenced and discussed rather than assumed. At S. Clemente, the artistic styles labelled as Romanesque, Gothic and Classical have all been identified in the mosaic, but what the significances of these for their twelfth-century audiences were has barely been touched on. And if styles were used self-consciously, then was it the patron's choice or the artist's? What about the difference between appropriation and influence, between a patron's borrowing something because he or she wished to be identified as Byzantine or borrowing something Byzantine and translating and using it in his or her own terms? The definition and understanding of style is a fraught topic, but surely these questions must come into our use of the term.

'Quality' itself, the very element that has been employed to distinguish a 'Byzantine' or Constantinopolitan mosaic and mosaicist from any other, is another vague concept. Scholars have signally failed to articulate what is meant by a 'good mosaic', beyond its apparent 'Byzantineness'. This can also be coupled to a perception of the mosaic in terms of how classicising or how close to the values of Renaissance art it comes in terms of its use of Classical models and emphases on realism, three-dimensionality, correct modelling of forms, use of perspective and colourism (all Good Things). Since 'Byzantine' can also indicate a level of 'abstraction', flatness and two-dimensionality, it is hardly surprising that there is a lot of tension in scholarly discussions between the 'Byzantine' and the 'Classical' in mosaic art.[40] 'Quality' is rarely seen as a technical issue relating to how a mosaic has been laid.[41] Nor does it seem to be a question of how the mosaic was perceived by viewers within the building it was set inside, how (or whether) it worked in situ. Rather, it seems that quality is judged, by and large, on the basis of close-up studies of mosaics, more often than not through photographs, almost as if mosaics were paintings in frames displayed in galleries. However, it is extremely problematic to judge mosaics in terms of oil paintings, for these tend to be created precisely to be examined from close to. In contrast, mosaics, usually placed on walls and vaults, were designed to be seen from a distance. In 'quality' terms then, some of the most important criteria must be how visible they are, how they interact with the architecture, how they relate to the lighting of the space in the building in which they were constructed. In discussing these issues in Part I of this book, I will bring to the fore something of the characteristics of mosaics as manufactured *works* – of art, considering how artistic choices about tesserae (and so the colours found in

mosaics) were in part determined by the availability of certain types of glass, which affected the final appearance of a mosaic. Production practices and economic circumstances must be seen as significant factors in the overall appearance of a mosaic, perhaps more than style.

Why mosaics should so persistently have been defined in terms of their 'Byzantineness' is an interesting question. The traditional answer is that mosaic came from the Roman Empire; the Byzantine Empire was the continuation of the Roman Empire and of the civilisation, skills and learning that went with the empire of which mosaic-making was a part, unlike in the Western European world, where skills and Roman traditions were lost.[42] Therefore the Byzantine Empire continued to make mosaics and send artists out to the Western and Islamic worlds when mosaics were needed there, largely as one-off commissions. Against this, as the weight of material in Part II will demonstrate, is the argument that the Western Roman world may never have lost the skill of mosaic-making, and that there were a great many mosaics made beyond the Byzantine Empire, and that they are too many and too varied for the model of defining them as 'Byzantine' to be convincing.

The historiographic response to the question relies on the foundations laid by the sixteenth-century Tuscan artist and author Giorgio Vasari, the so-called 'Father of Art History'. Vasari's *Lives of the Artists* set many of the tones and terms of reference for art history itself. Above all, Vasari's book made it clear that the job of art history was to look at artists in terms of their biographies, which defined the development and progress of art over time. But if art is defined as the story of artists, then medieval and Byzantine art, from where few artists are known, is consigned to the shadows. Indeed, Vasari loathed and despised Byzantine art, seeing it as the debased leavings of Classical art from which the glories of the Renaissance would rise.[43] He was particularly vitriolic about mosaic art: the countless mosaics on view in 'every old church in all and every city in Italy' depict 'figures . . . staring as if possessed . . . the way they are drawn, they all resemble grotesques rather than what they are meant to represent'.[44] Both 'Byzantine' and 'Greek' were employed as terms of abuse for those artists, often born and working in Italy, who produced art in a particular style, defined as 'stiff' and 'grotesque'.

One scholarly response to Vasari's ideas was to translate Byzantine art into Vasarian terms, so emphasising its Classical elements and looking for Byzantine artists, as if to demonstrate that Byzantine art *does* fit a model of artistic excellence. Style thus became a mechanism for identifying hands and hence artists and even masters. This also allowed a very important distinction: that despite how it was made, mosaic was an 'art', practised by artists, rather than a 'craft', the province of mere 'craftsmen'. Another response to Vasari was to treat Byzantine art as the height of artistic achievement in medieval art, a form of artistic practice that was particularly influential in the development of Western art, especially Italian medieval art, thereby establishing Byzantine art as the foundation on which the Renaissance was built. The influential art historian Ernst Kitzinger, discussing the Byzantine contribution to Western art, raised the art historical problem of Vasari's claim that Byzantine art and the *maniera greca* ('Greek manner/fashion/style') was a 'bad thing'.[45] For Kitzinger, it was not a question of the extent to which Byzantine influences were present in Italian art in the twelfth century but one of whether these influences were good or bad. Consequently, he sought to show that Byzantine art was good and that Vasari's account of Byzantine style was incorrect.

Another element of establishing mosaics within the Vasarian and art historical paradigm was to make the point that although what survives is good, what has been lost was even better. It is an

attitude that takes the view that wall mosaics outside the empire allow the reconstruction of the 'lost production of mosaics carried out in the capital'.[46] Several scholars set out to use the surviving mosaics of twelfth-century Venice and Sicily, for example, to show what the lost mosaics of Byzantium actually looked like – hence the emphasis on their Byzantine elements.[47] As a model of artistic quality, it returns us to that sequential development of mosaic style based on quality, on beliefs about centres and peripheries, and to the transmission of styles and skills, East to West. Mosaics from beyond the empire (which might be described as local, regional, indigenous or provincial) serve as the inferior copy (because a copy is always inferior to the original) of the superior Byzantine models, a copy from which these lost originals could be reconstructed. Bizarrely, but perhaps unsurprisingly, there have been occasions when surviving Byzantine mosaics have been measured against art historians' standards of quality and found wanting – the ninth-century mosaic of the Mother of God in the apse of Hagia Sophia in Constantinople for one.[48]

Where this leaves us in the study of mosaics is with an awareness that too much has rested on a set of presumptions about the medium as a Byzantine one, leading to definitions about style, iconography, artists, quality and dating that need to be reassessed, and debates in which major mosaics like S. Clemente rarely feature. Whilst medieval mosaics may well be 'Byzantine' in all or any of these aspects, the question that has to be asked is whether there is any evidence to support a particular mosaic or set of mosaics being defined as 'Byzantine'. Medieval mosaics are more eclectic in their appearance than such a definition would suggest and we need to consider them in their terms not ours, whether their patrons and audiences saw differences of styles and how they understood them.

In many ways, regarding mosaics in terms of their style is a dead end, partly because the assumptions long made about the centrality of Byzantine artists and the quality of their work are based on suppositions that have no basis in fact (and on hypotheses that were perhaps made tentatively and then were hardened into fact), but partly because of the way such ideas of style can only by studied through photography, which moves it away from any attempt to understand how the mosaics could have been seen and understood in their own time. Instead, it is time to consider understanding of mosaic as an art form from a different route, reflecting on technique, craftsmanship, materials, how artists learned and travelled, the realities of trade and networking in terms of the availability of materials and also in terms of the movement of visual ideas. On this foundation then, in Part II, I move to look at the development and spread of mosaic in the western and eastern Mediterranean.

But Part II is not a gazetteer of sites with mosaics, though it does offer a survey of these. Rather, in surveying medieval mosaics between the fourth and fifteenth centuries, it makes a case for continuous traditions of mosaic-making in a variety of places in the Mediterranean world, including in Italy. It sketches a place for mosaic as a medium in a changing world, one that in the fourth and fifth centuries was one of regional variations within what was still in so many ways one empire, but one that changed over the subsequent years to become several distinctive, separate domains: the Byzantine Empire itself; the Islamic world of the eastern Mediterranean; the evolving states and kingdoms in Italy. It will also take the discussion of mosaics into issues of function. In describing a mosaic as 'Byzantine' or 'Roman' or 'Venetian' or 'Muslim', my interest is less in the ethnic identity of its artist or its stylistic qualities or even its quality, than in its location, a shift from what it looks like to what it might say in a particular place at a particular time. Here, a 'Byzantine' mosaic is a mosaic in the territory making up the Byzantine Empire and

a 'Roman' one is a mosaic in Rome. Such a mosaic may contain visual elements that speak to us of art from the Byzantine Empire or iconographies that remind us of images used in the Orthodox Church but the question I have chosen to tackle is what those elements said in the milieu in which they were placed. How did a 'Roman' mosaic, such as that of S. Clemente, speak to its Roman patrons and audiences? My view in this book is that medieval art and the influences on it were fluid and varied, just as the meanings of that art were multiple and even contradictory. The medieval world was one of great versatility, one that could support happily the co-existence of non-complementary styles, and one where the great cities were not isolated but part of a wide commercial and intellectual network and shared many aspects of their visual culture.[49] In this world, other elements of medieval art – Western medieval, Balkan, Islamic – surely also affected the appearance of 'Roman' mosaics. And in Rome itself, because of what survives, we can see something that may well have been true in other cities where mosaic was employed: that what already existed, older works of mosaic (and indeed of art) were also fundamental points of reference.

The complex nature of patronage is another theme of the book. Patrons and artists made choices, both practical and ideological.[50] So, for example, the use of mosaics by popes in Rome was a different use to that required by emperors in Byzantium or by the City Council in Venice, though similarities are apparent because of the ways in which mosaics were made and the things that people chose to have depicted in the medium. All patrons of mosaic had their own reasons for funding mosaics and although they may all have looked to other areas of the Mediterranean world for inspiration, each patron was also almost certainly sharply aware of other local patrons and their commissions, in whatever media. Consequently, the deliberate use of mosaic, ahead of any other medium, was a crucial part of the message. Artistic imitation in terms of styles and iconographies is connected to status, for it testifies to the esteem accorded to a pre-existing monument, whether that esteem was based on antiquity, distinguished patronage, material or artistic quality, or anything else.[51] To establish a visual connection with a model was like forging a bond with a distinguished person: it produced authority and prestige and claimed a privileged relationship. My argument is that this is what the choice of mosaic itself as a medium achieved, and that when the medium lost its effectiveness in this way then it withered, becoming an eccentric choice. We should see mosaic not as a statement of Byzantine superiority but as a medium that speaks to relationships across the Mediterranean worlds, a medium employed in both common and different ways and at different times by Western Catholic Christians, by Eastern Christians and by Muslims, because it meant something to them. So this book asks about the political, religious and cultural meanings implicit in mosaic as well as in mosaics.

Part I

MAKING WALL MOSAICS

INTRODUCTION TO PART I

PART I DEALS WITH the making of wall and vault mosaics. It falls into four chapters which cover the different production stages, from the making of glass and of mosaics to what we can deduce about artists and costs, and what can be said about the value of mosaics. These are all aspects of mosaic-making that matter, because the appearance of a mosaic was governed not only by the artist's skill and choices but also by the materials the artist had available to work with. If a particular colour could not be made or bought, or if the supply ran short, then it could not be used in a mosaic. So much of what is actually on the wall was governed by this very simple rule of thumb.

Relatively little has previously been said about where the materials for mosaics came from.[1] The assumption, usually unspoken, is that glass tesserae came from the supposed home of mosaics, Byzantium, and were exported elsewhere. In the case of S. Marco in Venice, for example, it has been proposed that the tesserae used in the thirteenth-century mosaics of S. Marco were plundered from Constantinople after the Venetian-led Fourth Crusade which sacked the city in 1204.[2] But little is known about the Byzantine glass industry, to the point that it was once described as a 'medieval mystery'.[3] There is no real evidence (yet) for a Constantinopolitan tradition of glass-making and of tessera manufacture. Where, in fact, was glass made in Late Antiquity and the Middle Ages? Was it a readily accessible material? Were there changes in its manufacture (changing locations; changing technologies; changing costs) that might relate to patterns in the spread and quantity of wall mosaics? Were there ever detectable shortfalls in glass production, especially of coloured glass, which would have had a significant effect on the production of mosaics? These questions about glass production

need nuancing still further: How was glass coloured for tesserae, where and by whom? When and where was the coloured glass cut to size? These questions are central to our understanding of wall mosaics: without the glass, the mosaics could not be made; the technologies of colouring glass affected the very appearance of the mosaic. If we can answer these questions, then we can begin to unpick issues of costs and distribution of materials, of how easy it might have been to obtain the materials needed to put up a wall mosaic, and so to understand some of the reasons for the geographical and temporal extent and distribution of wall mosaics.

The book opens with the making of glass itself, since this was the fundamental material of wall mosaics. It examines the different stages of making and colouring glass in order to get a picture of how easy or difficult, cheap or costly it was to make tesserae. The findings of a steadily increasing technical and scientific literature on the making of Roman and medieval glass, including tesserae, provide a significant model for interpreting the workings of the glass industries in these periods, and have revealed a whole network of unsuspected connections. This data is now fundamental to our understanding of the questions I raised above, and forms the backbone of the opening chapter on making glass.

The making of glass leads to the consideration of the making of mosaics. In contrast to what is known about the glass for mosaics, much more has been written about how mosaics got onto the wall: the best of this work comes from those who have been able to note details and practices from the vantage point of scaffolds set up against mosaics. This section pulls together the observations and thoughts of conservators, art historians and contemporary mosaicists in order to create a narrative of the processes involved in putting a mosaic up.[4] I have also sought to set this material into the context of the logistics that might have been required to make sure that the most effective sequence of events was followed.

Discussion of these logistics opens the way to considering what it might be possible to reconstruct of two elements: the people responsible for mosaics; and the costs involved. Medieval artists were largely anonymous, but nevertheless it is still possible to think about how to put people onto scaffolds, even if the individuals remain unknown. In fact, by the fourteenth century, we know more names than we have previously realised. As for prices, building on Janet DeLaine's fundamental work on reconstructing the building of the Baths of Caracalla, I have produced some calculations that offer ball-park figures for what the glass in a medieval mosaic might have cost.[5]

Moving from costs to value, this first part of the book concludes with a look at what people – patrons and audiences alike – might have prized in mosaics in the Middle Ages. It considers why patrons wanted mosaics and what mosaic offered that other monumental art forms (painting, textiles and sculpture, for example) could not. It addresses how medieval viewers appreciated the medium.

These four chapters are limited by a shortage of surviving primary and secondary material. Often the same paragraph moves from the second to the sixth to the thirteenth centuries, because nothing survives to bridge these gaps. However, it is worth underlining that I do not mean to imply by this that things were always the same: we do not know and can only extrapolate.

Chapter 1

MAKING GLASS TESSERAE

A STANDING ARCHANGEL OCCUPIES THE south side of the arch in front of the apse in Hagia Sophia in Istanbul (Fig. 4). He is perhaps 5 metres high, dressed in court costume of tunic and chlamys, with red buskins on his feet.[1] He is made from mosaic in a variety of materials, set in assorted ways to create different visual effects. His tunic is almost all glass whilst his cloak is more stone than glass: the colours of the folds change, grey stone moving to red glass (Fig. 5). The orb he holds is made from glass but its highlights are picked out in marble; above the thumb a patch is visible that was originally silver but the silver heads of the metallic tesserae, the cubes from which mosaics are built up, have fallen off. A range of stones – different shades of marble, limestone – is employed, especially for areas where pink and white are needed, notably the angel's head and hands which are modelled in several tones of marble (Fig. 6). The shiny glass and matt stone tesserae are also used to create different light effects; silver breaks the monotony of the gold background; the expanses of gold on the angel's chlamys, and at his shoulder and cuffs, as well as in his hair, can, depending on the light, make the angel look both as if he is appearing out of the gold background, and that he is a part of that background. But where did the glass and stone tesserae come from? It tends to be tacitly supposed that they were made in Constantinople itself, but was that the case? And how was the glass turned into coloured tesserae in the quantities, usually in the tonnes, needed for a mosaic? How easy was it to get hold of glass in these sorts of quantities? Did the manufacture of glass tesserae change over the 1,200-year period of this book, and if so, what difference did that make to the mosaics themselves?

Considering how glass was produced and coloured influences the ways in which we understand the logistics of mosaic-making, about getting materials to



Figure 4 The Archangel Gabriel from the south soffit of the bema, Hagia Sophia, Istanbul, ninth century.

the site, about working those materials on site. Was glass fabricated or coloured on site? Was it cut up into tesserae on site? Do we know anything about the tools, equipment, skills and workmen? Understanding how tesserae were made also has implications for considering the appearance of a specific mosaic. To reiterate, a mosaic could only be made from the materials that were available to its makers. If certain colours of glass were unavailable to mosaicists, either because they could not be made or because they were unobtainable, and if those colours could not be replicated suitably through other media, then those colours could not be used in the mosaic. And so the availability of tesserae had a crucial effect on the appearance of a mosaic: the colours



Figure 5 The Archangel Gabriel, Hagia Sophia, Istanbul, ninth century, showing areas of particular materials.

employed had as much to do with availability as with artistic choice.

This chapter focuses exclusively on glass as a medium for wall and vault mosaic-making. However, as the archangel reveals, a proportion of the tesserae used in a mosaic were made from other materials, including stone, for greys and blacks in particular but also pinks and white, and pottery or terracotta for reds. Such materials were sometimes used for the visual effect they produced: the use of stone could create a matt effect against shiny glass and mother-of-pearl contributed a translucent sheen. However, they might also be employed because the colours needed in a mosaic were not always easy to produce in glass. Red glass, for one, was not easy to make and so was often replaced by other materials, including – as is the case with the



Figure 6 Detail of the right hand of the Archangel Gabriel, Hagia Sophia, Istanbul, ninth century, showing the modelling in different colours of marble and glass. Note the way in which the orb is made to appear three-dimensional and translucent through the construction of the thumb.

archangel's buskins – tesserae dipped in red paint. It is likely that much of this other material was obtained locally. The makers of floor mosaics, which were generally made of stone, seem to have obtained their materials as conveniently as possible: the relatively few petrographic analyses of floor mosaics carried out indicate that local or regional sources of stone were generally employed.[2] More exotic and rare stones and marbles could have been imported but in the larger Roman cities, where a lot of work in marble went on, it must have been relatively easy to pick up and use waste material as and when required. Almost no petrographic analysis has been done for wall mosaics but, since the quantities of stone involved in their making were far less than those of floor mosaics, a great deal could have been obtained as local stone or from *spolia* and waste. In the angel from Hagia Sophia, the white, pink and grey stones are Proconnesian marble from local Marmara and there is a slate-grey rock from Beykoz, a district of Istanbul.[3] Changes in the stone palettes of floor mosaics certainly reflect the availability and shortages of materials: the same must have been true for wall mosaics. Another useful but costly medium was mother-of-pearl, sometimes used as an inlay. In the first instance, it would have been imported, presumably from the Red Sea, where the Romans acquired most of their pearls. It might be used for the representation of actual pearls, as in the clasp of the great brooch on the shoulder of the Byzantine emperor Justinian depicted in the sixth-century mosaics at S. Vitale in Ravenna, or in the hanging pearl-like ornaments in the mosaics of the Great Mosque in Damascus. It could be cut into different shapes and set into the mosaic. This is the case in the twelfth-century mosaic at S. Clemente in Rome, where mother-of-pearl cut into rosettes, tear-drops and elongated ovals is used to create a cross behind the head of the Lamb of God in the centre of the procession of sheep along the base of the apse mosaic (see Fig. 138) or in the mosaics of the Church of the Nativity in Bethlehem (Figs. 53, 151 and 152). Such employment of mother-of-pearl in mosaics has been called a 'provincial vulgarity', as if 'proper' mosaics did not utilise it, but this underplays its rarity and value as a material.[4]

But glass was the dominant material used in wall mosaics, and so it is here that my focus lies. How was the glass for mosaics made and how

straightforward or complicated was the technology involved? And where did it come from?

MAKING GLASS[5]

Most importantly, in the Roman and into the medieval worlds, glass-making was a two-stage process. Glass was made in one place and then made into things elsewhere.[6] Consequently, it is important to be clear about whether the material under discussion relates to primary glass-making or to the secondary process of making glass objects.

At first sight, glass does not appear to be overly difficult to make. Ancient glass was made of three basic ingredients: sand (silica), fluxed (in order to lower the melting temperature) with soda (either natron, an evaporised mineral soda, sodium carbonate, or ashes from salty plants), and made more durable through the presence of lime (calcium oxide, contained in the sand or the plant ash). These raw materials were heated in a furnace at temperatures of between 1,100 and 1,200°C until they fused and liquefied into the substance known as glass.[7] This glass could then be made into objects.

But things are inevitably more complicated than that. Sand and soda need the lime stabiliser to prevent the glass from dissolving in water, and the balance of silica, lime and soda also needs to be right because it affects the melting and working properties of glass. Lime seems to have been added not as a third separate ingredient but naturally through the sand, in the form of seashells or limestone, and so there might well be an element of hit and miss over how much lime was present in a particular load of sand. Other impurities, iron for example, geologically present in sand, also influenced the making process. They could alter the temperature of the melt, or affect the basic colour of the raw glass. So it was never the case that any old sand would do. Once a suitable source of sand was identified, it made sense to keep using it, over and over again, for centuries.

The role of the fluxing agent is a significant one because analyses of glass have indicated a major technological shift in glass-making between the eighth and the eleventh and twelfth centuries, a change in the flux from natron to plant ashes. The standard Roman glass, wherever made, was one fluxed with natron. Up into the seventh century, most of the natron was brought from the deposits of Wadi Natrun, located between Cairo and Alexandria, and shipped via Alexandria across the Mediterranean.[8] But gradually from the eighth century on, natron glass was replaced by a glass fluxed with plant ashes. In the Mediterranean and Middle East, such plant ash was made by burning halophytic plants growing in saline environments from semi-desert regions across the Mediterranean, from the Levant and North Africa to Sicily, Spain and even France.[9] In western Europe, forest plant ash – ferns and wood – was more common. Plant ash glass remained the main type of glass produced in Europe and the Levant until the manufacture of lead glass in the fifteenth century.

This change from natron to ash was not straightforward. Different plant ashes influence the melting characteristics of the glass in different ways, most importantly because they introduce their own lime into the mix.[10] Consequently, sand and plant ash together make for an overload of lime. This could lead to the melt failing or to a brittle glass being produced. In its early stages, the making of plant ash glass involved experimentation and a lot of trial and error. In the Levant, at the glass-making site of Bet Eli'ezer, the erratic success of the firings suggests that the glass-makers were struggling to get to grips with the new technology.[11] At Banias, sand and plant ash were successfully mixed, but at Bet She'arim, an



Figure 7 The 9 tonnes of glass making up the Great Glass Slab, Bet She'arim, Israel, still in situ in the remains of its tank furnace.

enormous slab of glassy material was left in situ because it had failed to melt properly (Fig. 7). It contained too much lime, the result of mixing lime-rich sand and lime-rich plant ash.[12] So, in another development, rather than sand, ground quartz pebbles proved to be a better silica source. Another drawback of plant ash as a flux is the amount needed. In contrast to natron glass, where sand was the major ingredient, with plant ash glass, a ratio of roughly two-to-one of ash and silica was needed.[13] It is unclear whether these technological issues led to a drop in glass production in the eighth and ninth centuries, but it is conceivable that they did, and that may have been one factor in the decrease in mosaic-making that we shall see in this period.

It is not clear why the change in fluxing agent took place.[14] Both technological reasons and economic factors are ambiguous. On the one hand, compared to plant ash, natron was a relatively pure source of alkali and so produced glass more reliably. It was also easier to transport and less was needed. On the other, plant ash as a flux reduced the melting temperatures for the raw materials, decreasing the quantity of fuel needed, which was the most costly raw material for glass-making. There may have been problems with the supply of natron from Egypt: between *c.* 811 and 832, Egypt was in an almost constant state of civil war, which may well have reduced the supply of natron, forcing glassmakers to look elsewhere.[15] Environmental factors may also have affected the amount of natron available as increases in heavy rainfall at Wadi Natrun in the eighth century perhaps reduced the amount of natron available in the evaporitic deposits of the oasis.[16] However, plant ash technology was not a completely new development in the eighth century. It had been in regular use in the inland Middle East (Sasanian Iraq and Iran, for example, in the second to seventh centuries AD), an area where natron may not have penetrated.[17] Perhaps when the supply of natron began to be a problem in coastal regions, glassmakers looked east and learnt from those regions where plant ash was already in use. In the Levant, the movement inland and east of the Abbasid capital to Baghdad in 762 may well have assisted in this shift. Certainly at the Islamic glass-making centre of Raqqa in Syria, it must always have been easier to produce plant ash on the spot from local plants than to import natron from Egypt. Interestingly, though much later, in the thirteenth century, as its glass-making industry took off, Venice found it more viable to import plant ash from the Levant and quartz pebbles from Pavia rather than to buy raw glass.

For whatever reasons, how glass was made changed in the eighth century and that shift from natron to plant ash glass can be detected

via chemical analysis and used as a means of dating when the glass used in tesserae was made (even if not when the tesserae themselves were used). It also enables some tentative conclusions to be drawn about where the raw glass for mosaic tesserae came from, for it is possible through its chemical characteristics to trace glass back from the site where it appears to the general area in which it was produced (its primary production location). In the Roman and early medieval worlds, this generally seems to have been the Levant or Egypt.[18] The scale of primary production also suggests that glass was very widely used in huge quantities in the Roman and Late Roman worlds, implying it was also relatively cheap.[19] What is still unclear is whether, and how far, the switch from natron to plant ash affected the amount of raw glass made and its distribution. Nor is the knock-on effect of this on the production of glass vessels clear: we are uncertain how far this may have decreased in east or west, and whether such changes reflected problems with obtaining raw glass or a loss of glassworkers and craft skills, or whether people's requirements changed. Debates about glass production need also to be situated within considerations about trading networks in the Levant, Egypt and the Mediterranean, and whether political conflicts in the seventh and eighth centuries caused these to decline.[20]

In terms of *where* glass was made, the sand sources have proved to be the single most important factor. The Roman author Pliny described the fortuitous invention of glass as the work of a group of Phoenician merchants preparing their meal on a sandy Levantine beach, using the blocks of natron from their cargo as a fireplace: these caught fire, melted the sand and made glass.[21] However true that story was, Pliny knew enough about glass-making to locate the industry correctly at a major sand source. He explained that sand from the River Belus (now in modern Israel) was best, a claim supported by Strabo, who also said that Levantine sand was suitable for glass-making, and added that Alexandrian glassmakers used Egyptian sand.[22] Excavations have uncovered enormous glass-making furnaces in the areas close to the Belus and around Wadi Natrun in Egypt.[23] These were tank furnaces into which the raw materials were tipped and then fired; what they reveal is that glass was not made in small individual quantities when required but produced on a vast scale. At Wadi Natrun itself, one furnace could have produced perhaps 17 tonnes in one firing; another up to 20 tonnes.[24] In the seventh and eighth centuries, seventeen short-term furnaces at Bet Eli'ezer, in modern Israel, could each have produced 1.5 tonnes of glass at one firing, 25.5 tonnes in all.[25] Four furnaces at Tyre in the Lebanon, where the material is no earlier than the eighth century, had the overall capacity to make over 140 tonnes of raw glass. Furnace 1 alone would have produced over 37 tonnes of glass each time it was used – and evidence suggests that it was used more than once.[26] At Bet She'arim, also in modern Israel, a 9-tonne slab of glass was discovered inside a huge ninth-century tank furnace[27] (see Fig. 7). To translate these quantities into terms of tesserae, if we take the average weight of a glass tessera as 1.5 grams, then 20 tonnes of glass from the Wadi Natrun furnace would have made over 13,000,000 tesserae; 140 tonnes from Tyre over 93,000,000 tesserae.[28] Even the slab at Beth She'arim would have sufficed for some 6,000,000 tesserae. In other words, the glass needed for one mosaic could potentially have been provided by one or two furnace firings. As we shall see in more detail in the discussion of logistics and costs in Chapter 3, these quantities would have covered a great deal of wall – 93,000,000 tesserae would almost have sufficed for the 6,318 square metres of mosaic at Monreale in Sicily, for example.

We should not underestimate the effort involved in this industrial scale of glass-making. It was a huge task to prepare these vast furnaces

for firing: the weight of sand and flux needed to produce such quantities of glass was at least a third as much again. This was another reason to locate furnaces near the sand sources. It was easier to import the natron flux and export the raw glass than it was to transport the tonnes of sand required. At Tyre, the glass-making sites are located in such a way as to make it easy to bring in raw materials and fuel by boat and the huge furnaces at Apollonia-Arsuf were also located near to the sea, presumably for similar reasons. Fuel was the next biggest demand: the Tyre furnaces, for example, needed to remain at a temperature of about 1,000°C for at least 30 days in order to complete the melt.[29] As both Bet She'arim and Bet Eli'ezer reveal, the monster furnaces were used until the immediate fuel supply was exhausted and then the glassmakers moved elsewhere in the same region, keeping as close as possible to the sand. Fire must have been an occupational hazard and it is no accident that glass furnaces were deliberately located outside cities: the same is true in thirteenth-century Venice, where the glass furnaces were located on the island of Murano. Once the melting was completed and the glass cooled, the tanks were demolished, the blocks were broken up and sold off in lumps to be melted down and made into glass objects, and the glassmakers might move off to another site.

This Levantine and Egyptian glass travelled across the Mediterranean. Shipwrecks dated between the Bronze Age (Uluburun) and the eleventh century AD (Serçe Limani) show that raw glass was exported across the Mediterranean and into western Europe. It has been found in fifth-century Italy, France and Switzerland, and as far north as Jarrow in seventh-century England.[30] The rise of Islam and the Arab conquests of Egypt and much of the Levant in the seventh and eighth centuries do not appear to have prevented or much altered its production and circulation. Large-scale primary glass production continued not only in sites such as Tyre but also in major Islamic centres, where it was both used locally and exported.[31] At Raqqa, a major Umayyad and Abbasid city, enormous tank furnaces were used both in the eighth to ninth centuries and in the eleventh and twelfth centuries.[32] Glassmakers at Raqqa appear to have used the same sand as that in the tank furnaces on the Levantine coast: plausibly, the glass was even made by the same glassmakers who had worked in the Roman and Christian Levant. When the Abbasids moved their capital from Raqqa to Baghdad, a proportion of the artisans, including glassmakers, moved with it, establishing glass production in Baghdad. Elsewhere, glass was still being made at Tyre in the eleventh century and findings from Sepphoris and other sites such as Samarra indicate, through their sheer quantity if nothing else, a continuous history of glass-working from the fourth into the fourteenth centuries, one not affected by the political upheavals of the Islamic world.[33] Glassmaking was familiar enough to be described by writers: Elbayrouni, writing in about 990, described glass as made from a mixture of sand and plant ash, and also how colours were made from specific minerals.[34] Although the manufacture of raw glass seems to have continued unbroken, the transition from natron to plant ash moved at different speeds in different places. Currently, the latest evidence for the use of natron in making raw glass in the Levant dates to the seventh-century glass factory at Bet Eli'ezer and to eighth/ninth-century glass vessels from Ramla, Jordan and southern Syria. At Raqqa, what have been seen as stages in moving from natron to plant ash have been dated to the late eighth and early ninth centuries: these finds appear to be the earliest documented use of plant ash by Islamic glassmakers.[35] Intriguingly, many of the tesserae used in the eleventh-century mosaics at Torcello in the Venetian lagoon and at Daphni in Greece were made from a mixture of

both Levantine natron and plant ash glass, indicating that the two technologies could exist together.[36]

So the material evidence provides a picture of on-going primary glass-making in the Levant, and possibly Egypt, throughout the Middle Ages. What of Byzantium? The Byzantine Levant, like the Roman before, and the Muslim after, was a site of raw glass-making. It is also possible that raw glass was made in Asia Minor, at Pergamon, where a glass distinctively different from that of the Levant or Egypt has been identified.[37] However, there is no evidence for the making of raw glass in Constantinople at any time in its Byzantine history. This is unsurprising. Sand, flux and possibly fuel would all have had to be imported to the city in huge quantities: it would have been easier by far just to import the raw glass. Certainly – though this cannot be currently proved, and will not be, until more analysis is done – it is plausible that the Byzantine Empire of the fourth to seventh centuries derived most of its raw glass from the factories of the Levant and Egypt. If then the Arab conquests of the eastern Mediterranean had little effect on primary glass production, the Byzantine world could presumably have continued to obtain its raw glass from the Levant after the seventh and eighth centuries – as long as trade relations remained positive. As yet, however, we cannot be certain of this.[38]

Raw glass may also have been made in western Europe in the Roman period and in Late Antiquity. Pliny had claimed that sand from the River Volturno (north of Naples) was suitable for glass-making, as was sand from sites in Gaul and Spain. Recent geological research suggests very strongly that he was correct and that not all primary glass production took place in the eastern Mediterranean, that glass may well have been manufactured in Italy and possibly Spain, although there is no archaeological evidence – yet – for this.[39] But certainly from perhaps the seventh century, western Europe increasingly produced and used its own primary glass, one which employed wood ash in place of natron, rather than importing it from the East.[40] This is made clear in the book, *De diversis artibus* (*About Different Arts*), written by a twelfth-century monk calling himself Theophilus, who may actually have been a Benedictine metalworker named Roger of Helmershausen. Theophilus described, seemingly from his own experience, the making of raw glass on a relatively large scale – the employment of at least twelve workmen is implied – from the construction of the furnace to the mixing of sand and beech wood ashes, the fritting of the mixture and its melting into glass.[41] Glass workshops are known across medieval Europe, and evidence of glass-working at a variety of important sites, such as Charlemagne's palace at Paderborn and the Benedictine monastery at Lorsch.[42] It has been estimated that between 1250 and 1500 at least 40,000 tonnes of glass were produced in central Europe, much for windows, including coloured stained glass, though whether this coloured-glass industry also produced tesserae is unknown.[43] In Italy, while we cannot be sure whether raw glass was made in the Roman period, it seems that it may have been manufactured in the early medieval period and that it really took off in the twelfth and thirteenth centuries, above all in Venice.[44] Here, the earliest written evidence for primary glass-making comes from a document of 1255, which deals with the import of plant ashes from the Islamic Levant. Such ashes were used as a flux in glass-making, and these concerns over their import indicate the presence of an already flourishing primary glass industry.[45] By the thirteenth century, Venice was exporting raw glass to the central Balkans, by the early fourteenth century to Egypt, by the 1340s to Greece, Rhodes, the Black Sea coasts and Constantinople, and by the fifteenth century to Syria – the Levant – itself.[46] Venice was not the only Italian city to develop a flourishing raw glass industry: by the thirteenth

and fourteenth centuries, glass was also being made in Tuscany, in Perugia and Piegaro in Umbria, in Milan and possibly in Sicily, though the evidence for raw glass production in Rome remains unclear.[47]

To return then to the archangel in Hagia Sophia: it is likely that the glass used in the mosaic came from the factories of the Levant or Egypt. It is also probable that this glass reflected some part of the gradual technological transition from natron to plant ash glass, for the archangel was installed in the ninth century, right at the period of technological change. But how was it transformed from raw glass into coloured tesserae?

WORKING GLASS

Getting hold of sufficient glass to make tesserae should not have been a problem whilst raw glass was both being produced by the ton and shipped across the Mediterranean, as seems to have been the case certainly up to the eighth century. After that, the continued existence of large furnaces in the Levant throughout the Middle Ages implies that glass was made on a grand scale in the Islamic world, and there was also a developing industry in raw plant ash glass in western Europe. It may well have been the case that there was less raw glass readily available and that the drop in quantity affected the use of the medium in the Mediterranean world. However, by the thirteenth century, if not earlier, enough glass was being produced in western Europe for stained glass to become a medium used on a considerable scale; presumably, for mosaics to be made also.

But glass-making and glass-working were two clearly distinct processes. Raw glass was perhaps the 'thing that travelled' long distances, rather than any actual glass objects, which could be made wherever there was anyone with the requisite skill to melt and shape glass and with access to the modest furnaces needed for these processes.[48] Softening glass requires a temperature of no more than 700°C, whilst the temperature required for glass blowing, although higher, is still only 1,000°C, a heat which could have been obtained relatively easily through any small furnace. Glass blowing, invented mid-way through the first century BC, was the most significant technological development in the making of glass objects for it allowed them to be both mass produced and repaired.[49] The general picture we have of glass-working as a trade in the Late Roman and Early Byzantine periods is of a small-scale but common craft in both large cities and small settlements, perhaps, but not inevitably, as part of an industrial area.[50] In the Christian and Muslim eastern Mediterranean, evidence from Levantine sites such as Beirut and Jaffa suggests that glass-working continued without interruption in the region from the Roman period into the twelfth century and beyond.[51] Glass was worked widely and seemingly continuously in the Western Roman world, from Britain to Spain and from France to Austria and the Balkans, and there was a considerable trade west to east in manufactured glass.[52] Glass continued to be worked throughout the Middle Ages in Italy, with several city-states possessing glass industries of one form or another: Castelseprio, Pavia (which took on a particular significance from the thirteenth century as the key source of quartz pebbles for use in plant ash glass-making), S. Vincenzo al Volturno, Torcello, Ancona, Bologna, Ferrara, Mantua, Padua, Ravenna, Treviso, Vicenza, Florence and Naples, to name only a few.[53] Venice had a permanent glass industry from the tenth century onwards, and by the thirteenth century was sending glass objects and glassworkers to the east, to the Balkans, Crete and Constantinople.[54] There may have been a close relationship between Islamic and Venetian primary glass-making; certainly some of the same raw materials were shared.[55] In Rome, the glass-working industry may never have died.

The glass from the Crypta Balbi indicates a high level of technical knowledge and a link between seventh- and eighth-century Roman glass production and that of previous centuries. At Orvieto, documentary sources recording the making of the cathedral's mosaics in the fourteenth century make it clear that raw and coloured glass came from Venice (which is to say Murano), and more locally from Monteleone and Piegaro.[56]

In both West and East, many small workshops simply produced glass objects for daily needs. Workshops, like the glass factories, tended to be set away from public and residential areas, usually on town margins and often close to rivers or main roads. When they were located in the walled areas of towns and cities close to the centre, it was in public buildings or areas that had gone out of use. In Rome, for example, the fifth-century glass furnace in the Crypta Balbi was built into ruins of a public building on the Campus Martius.[57] In Venice, glass-making was also a seasonal activity: in 1311, the Grand Council codified working conditions, prohibiting the working of furnaces between 5 August and 5 January without special permission.[58] Venetian glass-making was a strictly regulated industry whose mysteries were jealously preserved. The import of raw materials, especially plant ashes, the export of raw materials from Venice and the movement of glassworkers were all strictly regulated, with repeated edicts banning the export of plant ash, broken glass and sand, or banning glassworkers from leaving Murano and fining those who worked abroad.[59] Glass-working, like glass-making, seems to have been a transient craft. The Late Roman site at Jalame appears to have been a temporary factory, for when the fuel resources ran out the workmen moved on, leaving nothing behind but the basic furnace structures.[60] At sixth-century Anemourion, it has been suggested that simple glass vessels and windows were produced by glassworkers who moved from site to site according to demand and local needs. This relocation of workers is apparent again in the thirteenth and fourteenth centuries, with the presence of glass workers from the Balkans at Murano and Muranese in the Balkans, as well as Greek glassworkers in Venice and Venetian glassworkers in Crete and then Constantinople.[61]

Little is known about these Roman and medieval glassworkers, either primary or secondary. There are a few mentions of generic 'glassworkers' in written sources; some names survive from funerary monuments, others on the glass vessels they made. We know that glassmakers appear in the third-century *Price Edict* of Diocletian and that they were granted exemptions from taxes by the emperors Constantine I and Justinian I.[62] Tenth- to thirteenth-century documents from the Cairo Geniza show glass blowers working together in small groups of two or three, putting in their own money together, sharing tools, even in one case hiring skilled craftsmen. The Geniza evidence also indicates that considerable disparity between incomes (and presumably the social status) of individual glassmakers could exist.[63] Both Byzantine sources and the Geniza documents indicate that many glassworkers were Jewish.

However, the history of Byzantine glassworking, like that of its glass-making, remains largely unwritten.[64] Evidence for secondary glassworking is patchy and unclear. A few glassworking sites have been excavated and a trickle of accounts from Byzantium mention glass workshops where objects were made from glass: it is from one of these that we obtain our only knowledge of glass-working in Constantinople.[65] The eleventh- or twelfth-century *Life of St Photeine* describes how a fire in a glass-smelting workshop (ἐν ἐργαστηρίω ὑἑλοψητίκω) close to Hagia Sophia set fire to the street and nearly burned down the Chalkopratia church. This was more probably a workshop for making glass vessels than for making raw glass and so does not provide evidence for primary glass manufacture in the city.[66] Overall, it seems likely that glassworking continued to a greater or lesser extent

depending on the location, and that towns of different sizes such as Thessaloniki, Ephesos, Sardis and Amorium all seem to have been able to support glassworkers throughout the Middle Ages.[67] There appears to have been both local manufacture of glass objects and, by the thirteenth century, a steady importation of glass from Italy and from the Arab caliphates. The best-known (though no longer the only) Byzantine glass-working factory is that in Corinth, a site in the Forum which was originally dated to the eleventh and twelfth centuries.[68] This led to a theory that, when the Normans sacked Corinth in 1147, the Byzantine glassworkers there were carried off into captivity, taking their techniques and skills to Sicily, and becoming influential in the making of glass in southern Italy. However, the glass from the Corinth factory has been convincingly redated to the early fourteenth century and it seems likely that the glass factory existed before, during and after the Norman attacks on Corinth. In fact, on the basis of comparisons with northern Italian glass, the scenario has been reversed: the glassworkers at Corinth appear to have been Italians who took their craft to Greece.[69] Elsewhere, at Durrës in Albania, an eleventh-century kiln site in the Roman amphitheatre has been associated with both Norman and Byzantine court officials in the city.[70] And in Rus′ (medieval Russia), there may have been a few glass workshops in the north Black Sea region between the second and fifth centuries, and in Kiev in the tenth century.[71]

Another important element in the movement of glass is that, in contrast to pottery, glass could be remelted and was therefore worth recycling. A basket of glass fragments from Pompeii may represent a collection of shards for recycling, indicating that the deliberate collection of broken vessels and of cullet (glass waste) for remelting seems to have been in existence by the first century AD.[72] This recycling of glass and indeed of tesserae continued throughout the medieval period. Glass dumps of fragments, cullet and raw glass lumps, clearly for reuse, survive from various sites, from the Petra Church in Jordan (late fifth to early seventh century) to the Crypta Balbi in Rome (seventh and eighth centuries).[73] Shipwrecks show that glass fragments and cullet were transported across the Mediterranean for reuse. The third-century wreck of a small cargo ship, the *Iulia Felix*, off Grado was carrying a cargo of amphorae and about 140 kg of cullet.[74] The eleventh-century ship, perhaps Muslim, perhaps Byzantine, wrecked off Serçe Limani in Turkey, with its 3 tonnes of cullet in the hold, was trading in recycled glass, among other things.[75] Broken glass made an ideal form of ballast, one that could be off-loaded and sold at the other end of the journey.

In summary, then, glass-working appears to have been small-scale and localised but widespread and itinerant in the Roman and Late Roman worlds. How far this changed in the Middle Ages is doubtful, though the evidence from Italy suggests a similar regional industry. But this is not a model that would necessarily succeed in manufacturing tonnes of coloured glass tesserae for mosaics.

WORKING GLASS FOR TESSERAE[76]

Rather, the picture of large-scale raw glass production fits with a mosaic-making industry responsible for making millions of coloured mosaic tesserae for big mosaics (Fig. 8). The physical existence of these tesserae implies a larger scale of manufacture, perhaps specialised workshops, almost factories; it also raises the question of when and where the raw glass was coloured. But no physical evidence for ‘tesserae factories’ nor for the large-scale colouring of glass survives from the Roman or medieval worlds.[77] Bluntly, this means that we do not really know where mosaic tesserae came from. However, by



Figure 8 A scatter of loose tesserae from the Church of the Nativity in Bethlehem, giving a sense of the size, shapes and colours used in mosaic-making.

unpicking the stages of manufacture, we can begin to hypothesise.

It seems very likely that the first stage in making tesserae was the colouring of the raw glass. Because of the impurities present in sand, the blocks of raw transparent glass produced in tank furnaces were naturally coloured in greens, yellows and pale blues whilst the glass used in mosaics ranges through shades of blues, greens and yellows to reds, purples, whites and deep purple or very dark green, both often mistaken for black. Getting from one to the other was not straightforward. The colourants used in colouring glass remain relatively constant but many different factors can affect the result, from the nature of the sand (impurities such as iron that can change the colour exist naturally in sand) to the furnace conditions (the time for which the glass was heated; the temperature it reached; the furnace atmosphere, whether reducing or oxidising). All of these are areas that can be regulated with the appropriate technologies, none of which existed in the Middle Ages. This is not to say that medieval glassmakers could not control their environment. The glass from the Crypta Balbi in Rome makes it very apparent that the glassmakers there were well able to obtain a wide range of colours by exploiting the presence of iron and manganese in the sand and by controlling the amount of oxygen they let into the furnace.[78]

Four basic colouring elements were employed – cobalt, copper, manganese and iron – but these gave a vast range of colours and shades; even tiny quantities made a difference.[79] Cobalt served to colour glass in deep, intense blues. Copper could be used to colour it in a range of hues, from blue-green or turquoise in oxidising conditions to dark green and deep red in reducing conditions. Manganese produced brown and violet glass, and iron a range of colours from light green to blue and yellow and amber. Iron is naturally found in the raw materials of glass, and so decolourisers such as manganese, antimony and arsenic were added to clear the effect. From where the colourants were obtained is unknown. Iron oxide, for example, was common but cobalt was rare and not easily obtained: one key source appears to have been Tabriz in modern Iran.[80]

Depending on the furnace condition, the appearance of the colours caused by iron varied widely. A glass containing iron looks blue-green if melted in strongly reducing conditions, green in less strongly reducing conditions, and yellow or brown in oxidising conditions. This could be complicated still further if there was more than one colourant in the glass. So glass containing iron and manganese might be any of the iron colours through to pinks, purples and even 'colourless' glass, where the yellow of iron and purple of manganese cancelled each other out, creating



Figure 9 Sheets of coloured glass for making tesserae in the Orsoni Factory, Venice: this range of colours owes much to modern industrial techniques.

a sort of pale grey. Combinations of various oxides were used to make other colours. One version of 'black' (this time a very dark blue) was the result of a combination of manganese, iron and cobalt; dark green, one of copper and cobalt. Red was perhaps the most difficult colour to make.[81] But because the same colourant was used to produce a variety of colours, it is plausible that the wide range of shades of colour found in mosaic tesserae were created by accident rather than on demand: Roman and medieval mosaicists certainly did not have access to a range of carefully produced hues and shades that modern mosaic manufacturers such as Orsoni can create (Fig. 9). On the other hand, the demand for mosaic colours, if great enough, may have influenced the development of technologies for colouring glass, though we do not know enough at present to be able to trace this.

Old coloured tesserae themselves may also have been used as a source of colour. Such tesserae, dropped into the melt or simply softened and reused, seem to have been used to colour the glass used in coloured window glass and in enamels or indeed as the glass itself employed in enamelling as Theophilus claimed.[82] Coloured glass tesserae containing lead oxide may have been reused to colour glass for the making of more tesserae because this would lower the melting point of the batch, allow certain specific colours to be obtained and enhance the brilliance of the glass.[83] The second-century collection of two hundred or more coloured tesserae found at West Clacton in Essex may have been for use in a mosaic, though they would not have gone very far on the wall. More plausibly, they were for colouring glass or enamelling.[84] At the Crypta Balbi, it is apparent that coloured Roman glass tesserae were added to raw glass, perhaps for window glass. At Paderborn and elsewhere in northern Europe, finds of piles of tesserae have been interpreted as stockpiles for colouring glass when needed, and at the ninth-century monastery site of S. Vincenzo al Volturno, Roman natron glass tesserae were used to make coloured glass for windows.[85] But the details of this

process are obscure: the proportion of tesserae to glass, for example, is uncertain.

Another option, if enough were available, would have been to reuse the old tesserae in new mosaics, often mixed in with new tesserae. This was presumably the case at S. Cecilia in Rome where Late Roman natron glass tesserae were used in the ninth-century ('plant ash period') mosaics, and this may also have been the case at Torcello. Tesserae could have been recycled between mosaics: the Byzantine emperor Basil I is said to have taken tesserae from ruined Byzantine churches to use elsewhere.[86] The evidence from Rome and from S. Vincenzo implies that a lot of old tesserae remained in ruined and abandoned buildings, as did stonework and marble, and that it made sense to reuse the glass, just as these other materials were reused. The same must also have been true in the Islamic world after the Arab conquests of the eastern Mediterranean in the seventh and eighth centuries; it is highly possible that Arab mosaics reused older tesserae from Christian buildings.[87]

In addition to its colour, another technical challenge in making tesserae came in the opacifying of the glass, a process designed to reduce the passage of light through the glass that took place at the secondary stage through the addition of crystalline material (quartz for example) or bubbles or saline droplets to the glass. Darker coloured tesserae are often made of transparent glass; lighter shades were made by adding opacifiers: the opacifying crystals reduced the transparency of the glass. In Roman times, antimony (calcium antimonate) was used as the main opacifier. It is not known where the antimony came from, for it is relatively rare and was mined in only a few sites in the Roman world. By the fourth century, tin was increasingly used in place of antimony, but antimony also continued to be used as an opacifier in Rome until the Renaissance and beyond. By the eleventh century, in contrast, Byzantine glass tesserae contained quartz as a cheap but poor-quality opacifier. Calcium phosphate (often as bone ash) was used occasionally from the fifth century onwards, and increasingly after the fourteenth century. The rule of thumb appears to be that tin- and quartz-based opacifiers tended to be used in the eastern Mediterranean and antimony in the west, though marble or limestone was always a cheaper and easier source of white tesserae for mosaics than white glass.[88]

Tesserae were also coloured with metal foil, significantly gold, silver and their alloys (Fig. 10). Although gold sandwich glass vessels (where gold leaf is sealed between two layers of glass) had been in existence since the Hellenistic period, the earliest known gold tesserae come from the Nymphaeum of Lucullus and Nero's Golden House, both first century AD and both in Rome, whilst a mid-second-century mosaic from the Gymnasium Baths on Samos is the earliest example I know of the use of silver.[89] The silver in silver tesserae is much thicker than the gold, for, unlike silver, gold can be beaten to extreme thinness, less than one micrometre (μm– a thousandth of

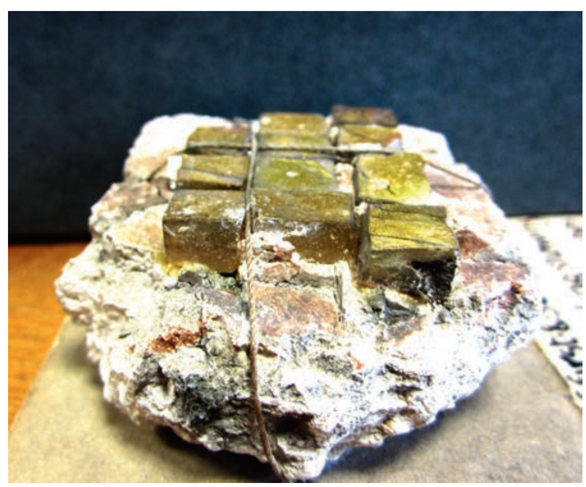


Figure 10 Gold tesserae from Daphni, Greece, eleventh century, showing the way in which the tesserae are structured in three layers, base glass, metal leaf and *cartellina*, as well as the underpainting of the surface and the layers of plaster in which the tesserae are embedded.

a millimetre): the gold leaf used in the tesserae of Roman churches is on average 0.1–0.3 μm thick.[90] This gold was obtained from beating out contemporary gold coins, rather than from raw gold, which was a strictly controlled state monopoly.[91] A tenth- or eleventh-century Byzantine manuscript includes what appears to be an account book of a goldsmith's workshop which, among other details, includes an account of the 'goldbeaters' (πεταλουργοὶ or χρυσηλάται), whose role it was to make gold and silver leaves for gilding objects and for book illumination, though it does not mention mosaic tesserae. At Orvieto, in the fourteenth century, it appears that a goldsmith made gold tesserae on site.[92]

Adhesion was a persistent problem with metallic tesserae, especially silver tesserae, since silver has a lower melting point than glass and so fusing the glass of the two layers was tricky. Losing the top layer (the *cartellina*) led in the case of silver to the exposed metal tarnishing and peeling off, as indeed happened in the mosaic of the archangel from Hagia Sophia. At Orvieto, the fourteenth-century contract documents are insistent in demanding that the gold leaf be sandwiched between two layers of glass, suggesting that the contractors were well aware of this difficulty. By varying the glass and its thickness and the type of gold used, different shades of gold tesserae could be made and deliberately used for different effects.[93]

None of the colouring, opacifying or manufacturing techniques for glass mosaic tesserae was straightforward. But the sheer quantity and range of coloured glass in surviving medieval mosaics indicates a considerable level of skill among medieval glassworkers – even if we do not know who they were or where they were. The Hagia Sophia archangel's tesserae are themselves creations demanding a degree of manufacturing expertise. But whilst it is clear that colouring glass was the trickiest technical task in the making of tesserae, when and where glass was coloured is unknown.

Some colours or decolourants could have been added at the primary production stage; others (red for one) were most certainly not, because of technological requirements. The sheer quantities of glass required for mosaics might have encouraged colouring on the same industrial scale as the making of raw glass. However, as I mentioned earlier, of the glass factories in the Levant, not one shows evidence of making tesserae. It seems as probable, as with vessel glass, that glass for tesserae was coloured at the secondary making stage, perhaps by specialists either in colouring or in making a range of colours or even one specific colour.[94] Analysis of the West Clacton tesserae indicates that there the colourants and opacifiers were added to a pre-made base natron glass; that in turn implies the existence of secondary glass workshops able to colour glass.[95] Many of the West Clacton tesserae could have been made from recycled natron glass vessels at any workshop with access to colourants and opacifiers, but because the red and some of the green tesserae had plant ash glass as their base glass, they could have been made at specific sites specialising in their manufacture.[96] Elsewhere, detailed analyses of the glass in floor mosaics from Antioch suggested that many of the colours there had a single supplier, though the red tesserae again were characterised by different chemical constituents suggesting that they may have come from three different workshops. Whether all the coloured glass was made in Antioch or whether some colours were imported is uncertain.[97] If the tesserae were produced over a short period of time just before the mosaic was made, perhaps on commission, then we might infer several suppliers, since it is unlikely that one supplier changed supplies and materials in the short period of time in which the mosaics were made. At Bet She'an in the Levant, the analysis of sixth-century red tesserae suggested that the same formula for their manufacture was used over a period of at least twenty-eight years,

perhaps in the same factory, plausibly situated in the town.[98] Much later, it seems that tesserae could be both imported and coloured on site. A document from Venice indicates that gold glass for mosaic tesserae was produced there from at least 1308: it permitted a Murano glass-maker to reactivate his furnace in the summer in order to make 1,500 gold slabs, known in the city as *lingue* (*tongues*, from their shape), for S. Marco.[99] Evidence from Orvieto in 1321 makes it clear that slabs of colours including gold, blue, green, red and yellow, as well as gold and silver *lingue*, were imported from Venice, and indeed from other locations; but it is also clear that glass was coloured and tesserae made on site, with a furnace specially built for this purpose.[100] Similarly, the analysis of some tesserae from the Florence Baptistery suggest they were obtained from an unidentified but possibly local source of glass.[101] And as coloured translucent stained glass was increasingly used in western Europe from the twelfth century onwards, there may have been some overlap in glass-colouring practices with that medium.[102]

As the Antioch floor mosaic materials hint at, the difficulties inherent in making coloured glass from scratch perhaps led to specialised workshops making a range of coloured glasses or even a single colour of glass. These may well have been large, since so much coloured glass would be required by one mosaic. The idea that the making of certain colours was the preserve of individual craftsmen – that one family held the secret for blue glass and another the secret for red, for example – has long been popular.[103] But whether a specific glassmaker was ever attached to a mosaic workshop, either directly or by contract, is unknown.

Another source of information about colouring glass for mosaics comes from a handful of medieval manuscripts containing some more or less doubtful instructions about the processes involved. The earliest is a late eighth-century Latin manuscript, the *Compositiones variae* (also called the *Compositiones ad tigenda musiva*), whose recipes were repeated in a later eighth- or ninth-century text, the *Mappae clavicula*.[104] But how far these texts were practical guides and how far they dealt in alchemical secrets is unclear.[105] Theophilus' instructions for colouring glass are different again, relying either on the glass remaining molten in the furnace and being affected by the continuing oxidisation of the wood ash used in its manufacture or on the use of old tesserae picked up from 'pagan' (Roman) sites.[106] Several Italian manuscripts of the fourteenth, fifteenth and sixteenth centuries record more likely recipes for making glass, colouring glass and making glass objects, and it is highly likely that there was a section on mosaics in Cennini's fifteenth-century work *Il libro dell'arte* (*The Craftsman's Handbook*).[107] But we are desperately short of substantiation as opposed to speculation.

Surviving fragments of coloured glass do not help to solve the problem of its manufacture, merely reinforcing the fact of its existence. In the Roman period, the coloured glass seems to have been sold as preformed ingots.[108] These strong-coloured 'cakes' mirror the shapes of the inside of basic Roman pots, suggesting that after the glass was coloured, it was then ladled out in great dollops into pots which had been coated with a separator on their insides (carbon or powdered clay). As soon as the glass had cooled, it could be turned out, rather like a jelly.[109] These ingots might translate into the types of 'cakes' of coloured glass that have turned up on many sites across the medieval world, though these so-called 'cakes' seem to be lumps of glass of various thicknesses rather than anything more uniform. At Petra, in the main church, where about seventy-three 'cakes' of coloured glass were excavated, they seem to have been made very simply by pouring glass onto the floor or into a mould.[110] They look too chunky to have been cut into tesserae but it is possible that they were heated and pulled or even

flattened to the requisite thickness before cutting. Similar lump-like chunks of coloured glass suitable for melting down and cutting up survive from a variety of other church sites in the eastern Mediterranean including Jerash, Khirbat al-Karak, Tell Hesban, Abila and Athens. In Late Antique Gaul, Germany and Switzerland, much thinner examples have been found.[111]

These masses of coloured glass surely came to the site as pre-coloured pieces to be turned into tesserae on site, rather than being coloured on site.[112] The use of transparent glass at the fifth-century Arian Baptistery in Ravenna indicates the presence of raw glass there: this may have been coloured, or not, on site.[113] Much later evidence from Murano indicates that coloured glass sheets were supplied to the site to be cut and even gold glass appears to have been manufactured and cut on site at Orvieto. However, in contrast, there is an intriguing hint in a Byzantine text suggesting the buying and selling of tesserae in Constantinople. The tenth-century *Patria*, a collection of writings about the city, says: 'When the blessed one [the fifth-century bishop Marcian] wanted to build the church [of St Anastasia] at Ta Psepha, *where mosaic tesserae are also sold*, he bought the site for two thousand gold coins, for the place was abominable.'[114] *Ta Psepha*, used here as a place name, refers to the stones or pebbles used in mosaic (το ψῆφος), and only possibly to glass tesserae, so the phrase 'where mosaic tesserae are also sold' may have been used to explain the name of the site. But it is unlikely that the *Patria* would have invented an aside about selling mosaic tesserae if it was a wholly unfamiliar concept, so it certainly implies that the idea of selling tesserae in Constantinople in the tenth century was not unknown, though whether the tesserae were old or new, glass or stone, made there or elsewhere, and to whom they were sold and for what purpose, remains a mystery.

How the coloured glass, lumps or cakes, were turned into tesserae is another debatable story.[115] The apparently obvious and straightforward way would have been to pour out a dollop of glass onto a flat surface, like a stone, dusted with powdered clay (to prevent the glass from sticking, like flour on a pastry board), and then to press it flat with a wooden log.[116] But cutting this plate into strips and tesserae would have been an awful, messy, time-consuming and potentially dangerous task. Glass has to be cooled slowly (annealed) before it can be cut, because glass is a poor conductor of heat: the surface cools much faster than the interior and so contracts more, creating major stresses within the glass and causing it to shatter: pick the wrong moment and the cutter is left with shards rather than tesserae.[117] Today, diamond or hardened steel glasscutters are used to score fine lines across a pane and cut strips, but there is no evidence of these tools or of this being done in the Roman or medieval worlds. Here, usually, rather than scoring and cutting, glass was grosed (nibbled away with a pair of pliers) at the edge, but this technique would not work for tesserae. So it is not easy to be sure that plates of coloured glass like those made at the Orsoni workshop shown in Figure 9 were made and used in the Middle Ages. Theophilus described a different technique, the 'muff' technique, like that used for making windowpanes.[118] Here, molten glass was blown and shaped into cylinders. These were cut open lengthways and opened into sheets of glass which were then reheated slowly in the annealing chamber of the furnace to flatten them under their own weight. The glass was then cut to size and shape, depending on what was needed. It was in similar vein, but five hundred years later, that the Tuscan author and artist Giorgio Vasari described the cutting of tesserae in glass workshops.[119] However, this method too would suffer from the problems inherent in cutting cold glass, and its tendency to splinter.

An alternative method has been proposed by Mark Taylor and David Hill, the Roman Glassmakers, a very widely respected pair of

glassmakers who specialise in researching the techniques involved in Roman glass-making.[120] In this, molten glass is poured, either from a large gather or from a small pot, to form a length rather than a disc or a plate. This is flattened, perhaps with a damp wooden block or a hot metal plate (similar to making window panes) and shaped, probably through stretching the bar out with pincers and some reheating. This shape is a strip with straight edges, long but only perhaps 1 centimetre thick, a very convenient form for tesserae, which are more or less square. After annealing overnight, these bars could staightforwardly be snapped off to size with a hammer and hardy (the block with an edge used for cutting stone tesserae for floor mosaics), or with pliers, either in the workshop or 'on the job'. Technically, this process is quicker, easier and relatively uncomplicated compared to casting and cutting flat plates or flattened blown glass.

This method could also be used for making gold tesserae.[121] Once the strip was flattened, and perhaps after a reheat, the gold leaf could be added: gold sticks readily to hot glass. Smoothing the foil on the glass would have to be done carefully to avoid rips and tears. Then the thin top layer (the *cartellina*) could be made by blowing a gather of glass as hard and fast as possible until it was very thin and easily broken. It would cool quickly and bits could be broken off and laid on the surface of the hot glass and gold. Reheating would fuse the glass to the lower layers and, after annealing, the glass could again be broken into tesserae.

With gold glass, however, what is felt to have been more likely is that the glass was blown in thin cylinders or similar shapes from which the *cartelline* were cut, the metal foil was laid on the *cartelline*, and then molten glass poured onto the foil to create the support (so effectively made backwards, thin layer first). This soft glass and foil sandwich could then be turned rapidly upside down onto a flat surface covered with refractory powder (so that the glass did not stick to it) and pressed as a sandwich to stick the layers together, creating the elongated slabs from which the tesserae were cut.[122] Both at Orvieto and in Venice, these gold sheets or slabs were called *lingue* and the word fits the long, thin cakes of gold and silver glass found at S. Marco and dated to the twelfth century. [123] Several texts between the first and eighth centuries describe methods similar to this, and the *Compositiones variae* gives an account of the layering of glass.[124] In contrast, Theophilus' description is misleading. He suggested that sheets of glass were cut into small squares (whether these were slabs to be cut again or the actual tesserae is unclear) and covered on one side with gold leaf; each was then covered with a film of ground glass and heated. This procedure would not have worked: during firing, the ground glass would have softened, rather than melted (the melting points of glass and of gold and silver are close) and created an uneven layer full of bubbles.[125]

In terms of making tesserae, it is likely that more than one practice occurred at the same time. Some tesserae came to a site as coloured lumps, some as bars and some already cut. Much surely depended on the location of the site, the quantity of tesserae needed and the colours required. In terms of the transportation of materials, raw glass, coloured glass cakes or tesserae would all work as cargo or even as ballast. But if raw glass was brought to the site of the mosaic, then either the mosaicists possessed the technical skills to colour it, or there were on-site glassworkers. And there must also have been enough workmen to cut the tesserae and to sort the colours. Whether these were always one and the same will have depended on the size of the workforce employed. At Orvieto, there were mosaicists, glassmakers and tesserae cutters and Father Giovanni Leonardelli was one of several craftsmen who worked there across two or more of these specialisms.[126] We cannot use Orvieto to extrapolate backwards with any certainty, but it was clearly not unusual that one

man commanded this range of skills and we should be careful not to be too quick to compartmentalise tasks. Storage space for glass and tesserae alike would have been required, as well as room for furnaces (for colouring and softening glass) and fuel, and for cutting tesserae and sorting colours into containers of some sort. And if gold and silver tesserae were made on site, then the precious metal had to be obtained and kept safe by someone. These logistics of mosaic-making are something that I will return to in the next two chapters.

THE ANALYSIS OF TESSERAE[127]

Before that, however, I want to explore what the analysis of glass tesserae has told us about mosaic-making. I have already highlighted two areas where this sort of investigation has shaped our understanding. One was the glass tesserae from the Antioch floor mosaics, where study of the chemical constituents of the glass offered some answers to questions about suppliers of coloured glass. The other is the use of analysis to distinguish between natron glass and plant ash glass and so to establish the fundamental technological shift in the making of glass. Natron glass can itself be subdivided further into several distinct groups, identifiable through their chemical make-up, and some of these groups can be definitely associated with specific production areas in the Levant and Egypt, the two main sources of supply for raw glass across the Late Roman and early medieval world.[128] Although the recycling of glass complicates the understanding of its chemical composition, it does not prevent it. The base glass of tesserae can be identified as natron or plant ash, or even as both mixed together; it can even be recognised as Levantine or Egyptian.[129] Knowledge of the composition of the base glass coupled with analysis of the colourants can also help to build a picture of where tesserae were made and coloured. The glass opacifiers, antimony, tin and quartz, provide a third strand in this picture of deciphering glass, for various types of opacifier were used at different times.

So by analysing the base glass, colourants and opacifiers, it becomes gradually possible to see whether the tesserae from one site resemble those from another: are the tesserae used in the mosaics of fifth-century Ravenna, say, the same as or similar to those used in sixth-century Ravenna or fifth-century Rome or Constantinople? Do they share the same base glass, suggesting a common source for that, but were they coloured and opacified differently? Or similarly? The answers there would offer suggestions both about manufacturing coloured glass but also about possible trade networks in coloured glass for mosaics. If, for example, the blue glass used in S. Vitale in Ravenna and in the sixth-century mosaics of Hagia Sophia in Constantinope was made from the same base glass, coloured in the same way with cobalt and opacified with tin rather than antimony, that might suggest a common source and, moreover, one that might have been eastern or Byzantine. If the base for the blue glass was the same but opacified at S. Vitale with antimony and at Hagia Sophia with tin, that might suggest two sources for the coloured glass, and even the possibility of one western and one eastern. Then, by gradually putting together a picture of what sort of glass was where, it becomes possible to construct trade networks in both raw and finished goods, to consider economic and social factors that might influence trade in glass, to see connections between places that might otherwise not be obvious, and to become aware of shared or localised technological processes (and people involved). Consistencies in the tesserae used perhaps indicate a consistent source of supply, whilst inconsistencies may suggest that a mosaic workshop commonly purchased from a glassmaker, a supplier or a range of suppliers.[130]

Currently, the analyses of tesserae are patchy and very incomplete, work on colourants is in its very early stages, and the complexities of recycling glass add another level of uncertainty. It is almost impossible at present to work out detailed groupings within and across mosaics because we simply do not have enough data.[131] Nevertheless, some very general outlines are emerging. Most work has been done on glass wall tesserae in Italy, especially in Rome. Here, between the fourth and twelfth centuries, mosaic glass was overwhelmingly the standard Roman natron glass, opacified with antimonate or with bone ash.[132] Tesserae of this kind are found in every Roman church where glass analysis has been carried out, from S. Pudenziana and S. Sabina (fourth and fifth century), to S. Theodore, S. Lorenzo and SS. Cosmas and Damian (all sixth century), S. Cecilia (ninth), S. Clemente and S. Maria in Trastevere (twelfth century). In Rome, of course, it is also always possible that there was a considerable reuse of tesserae, since there must have been a considerable quantity of old tesserae lying around the city throughout the Middle Ages. Despite this, the base glass used in all of these churches is so similar that it has been suggested that it consistently came from the same factory, implying both that the composition of base glass could have remained consistent in a single workshop over centuries, and that natron glass went on being made past the traditional watershed of the eighth century.[133] Interestingly, the gold glass used in Roman churches in this same fourth- to twelfth-century period also seems remarkably consistent, again implying a continuous tradition in the manufacture of gold glass tesserae in the city. The particular techniques of the gold sandwich glass and of pinky-coloured glass employed for flesh tones (using colloidal gold) found in Rome are not widely found, and imply either that Roman glassmakers had a very good grip on the necessary technology over a long period of time or, because the base glass is so homogenous, that a lot was made in a short time and reused constantly.[134] However, even in Rome the production of tesserae was never consistent. Fourth-century glass tesserae from Ostia are made from natron glass, with the exception of one red tessera, which was made with a plant ash glass, underlining the 'special nature' of red glasses, and suggesting, as at Antioch, specialised workshops.[135] In Rome too, changes in the opacifiers used in coloured tesserae are apparent, as is a distinction between tesserae used in Rome and those used in the Byzantine Empire. By the twelfth century, Roman plant ash tesserae were opacified with tin oxide; Byzantine tesserae were opacified with quartz.[136] By the thirteenth century, tin was regularly in use in Rome to opacify tesserae, antimony was all but gone and quartz was rare.[137] So this Roman analytic material is distinctive, implying a local production of some coloured glass and tesserae, and just possibly even of raw glass.

In contrast, in the sixth-century mosaics of the Neonian Baptistery in Ravenna, natron glass opacified with antimony and natron glass opacified with bone ash were both used. The former was produced according to Roman tradition: these tesserae were probably coloured and opacified in Italy, even if the raw glass itself did not come from Italy (of this we are not certain). They may have been reused from an earlier mosaic or they may have been made especially for the Baptistery. The second type of natron glass, opacified with bone ash, is comparable to fifth-century glass and tesserae from the Petra Church in Jordan, and so probably came from a site in the Levant.[138] So, presumably, there were two sources for the glass or the tesserae. These different tesserae were set indiscriminately next to each other with no attempt made to keep them separate, so the source of the tesserae made no difference to the mosaicists – indeed, in artistic terms, it makes no difference since a tessera opacified with antimony cannot be

told apart from one done with bone ash by the naked eye. But it does raise the question as to why two sources of tesserae were needed. Possibly the mosaicists had bought or brought colours (as cakes or tesserae) from the Levant and run out, and so were compelled to make good with what could be obtained locally. It may have been the case that they had bought or brought their coloured glass in Italy and needed to import more. Perhaps there was a shortage of antimony for opacifying the glass, and so the employment of bone ash opacified tesserae was an economy measure: expense, possibly coupled to a lack of skill, certainly seems to have been a factor in later Byzantine glass cheaply opacified with quartz. These scenarios presume that tesserae were made and imported especially for the Neonian Baptistery, but it may also have been the case that for this project the mosaicists were using up stock tesserae left over in Ravenna from other projects.

The sixth-century tesserae from S. Vitale and from the Eufrasian Basilica in Poreč also tell an interesting story. Visually, these two sets of mosaics are very similar, so alike that it seems highly probable that the same mosaicists were involved with both.[139] But their tesserae are not quite the same. Their base glass is natron, but tesserae from Poreč are opacified with tin and those from S. Vitale with both antimony and tin.[140] As at the Neonian Baptistery, it is unlikely that the on-site mosaicists would have coloured raw glass in two different ways at two separate sites; it is more plausible that some of the tesserae or coloured glass at S. Vitale came also from local Italian sources, sources that have not (yet) shown up at Poreč.[141]

Still in sixth-century Italy, very detailed analyses of tesserae from the chapel of S. Prosdocimus in the Basilica of S. Justina in Padua have been carried out, looking at the gold tesserae, the coloured tesserae and the opacifiers.[142] The gold tesserae have been shown to share the same base glass composition as sixth-century gold tesserae from the church of S. Croce in Ravenna, suggesting that the raw glass came from the same site or area, probably in the Levant. But this base glass has a different composition from that of the Neonian Baptistery, indicating two different Levantine sources for some of the raw glass used in Ravenna. The coloured glass from S. Prosdocimus is different from that of S. Vitale but it also differs from Byzantine mosaic tesserae from St Polyeuktos and Hagia Sophia in Constantinople, and that implies at least three different sites for coloured glass (if we assume, as the Antioch evidence indicates, that glass was coloured consistently). But these three sources do not necessarily equate to three different factories for coloured glass or tesserae: some of the raw glass might also have been coloured on site. The opacifiers at S. Prosdocimus are also interesting. Two were noted: copper, used for orange/red/brown glass; and tin. In its chemical make-up, this orange glass appears very like eastern Mediterranean orange glass from the floor mosaics at Antioch and from Sagalassos, and contrasts with the orange glass from S. Vitale, which was opacified with antimony like Roman glasses. But other coloured glasses from S. Prosdocimus, including green, turquoise and purple, were similar to tesserae from Ravenna. This may indicate that the orange shades of tesserae were produced by specialist workshops in the eastern Mediterranean. It also seems that some of the tesserae from S. Prosdocimus were made in the sixth century, but that others were made by recycling older Roman tesserae.

Adding the sixth-century material from Byzantium throws another set of characteristics into the mix. Tesserae from St Polyeuktos in Istanbul are an eclectic collection of glass types, including reused Roman glass, sharing both similarities and dissimilarities with tesserae from Hagia Sophia and Ravenna. There is greater diversity in the colouring of the glass, with colours, notably turquoise and green, used at St Polyeuktos that are not found in Hagia Sophia or S. Vitale.[143] The selective reuse of old Roman tesserae at St Polyeuktos implies that some

colours were highly priced and more difficult to produce or even not produced in the sixth century, perhaps because there was a shortage of raw materials, notably cobalt. And enough of the tesserae at St Polyeuktos are plant ash glass to suggest that repairs to the mosaic took place at a later period, presumably between the eighth century (the transition in glass types) and the twelfth century (by when the church had fallen into disuse and disrepair).

From all of this, it seems fair to say that many sixth-century tesserae across Italy and in Constantinople appear to be made from a very similar base glass. This implies, unsurprisingly, given what we know about the making of glass, that there was a major source of supply for raw glass located in the eastern Mediterranean, which was widely traded. The data also suggests that there was more than one place where this raw glass was coloured, though what it does not tell us is where that was. It indicates, however, that more than one source of coloured glass could be employed, unsystematically, on one site, and that the same set of mosaicists did not automatically obtain their coloured glass or tesserae from the same source. Finally, the analysis of glass helps us to identify repairs and changes to mosaic programmes, as at St Polyeuktos, and indeed at S. Prosdocimus, where plant ash glass suggests twelfth-century repairs. So it is a picture in which very broad outlines, just hints and suggestions about glass production and colour workshops, are beginning to appear. These sketchy deductions hold out the hope that, in time, a more coherent picture can be constructed.

There is a similar but smaller concentration of tesserae analyses for the eleventh century, where work on the mosaics at Torcello in the Venetian lagoon, and at Hosios Loukas and Daphni in Greece, raise some thought-provoking connections. At Torcello, outside the cathedral, glass finds have provided evidence for local glass production, though not of mosaic tesserae for use inside the building.[144] Rather, the tesserae for the mosaic of the Last Judgement on the west wall were brought to the site. These tesserae are a mixture.[145] Some are made from typical Roman or Late Antique natron glass; some are made from eleventh- to twelfth-century Islamic or Middle East plant ash glass; but the majority are made from a mixed natron/plant ash glass. The use of three types of base glass indicates that a wide range of types of glass tesserae was available in eleventh-century Italy. The natron tesserae reflect either a continued circulation of older natron glass in the eleventh century (as recycled vessels or possibly as unused raw glass) or a reuse of old tesserae.[146] The plant ash glass fits the new technology of glass-making that was gradually replacing natron glass, whilst the mixed glass tesserae indicate a part-way stage in the change-over process, presumably in the Levantine factories. This mixed glass was already in existence in the late eighth to early ninth centuries (perhaps first made at Raqqa) and was certainly still being made in the eleventh century, for it is present in the glass on the Serçe Limani shipwreck. Consequently, it is likely that all the raw glass, both natron and plant ash, came from the Levant at different times. However, where the raw glass was turned into coloured tesserae is unknown. And, as often seems to be the case, the opaque red glasses, made of mixed natron/plant ash glass, form a distinctive and tight compositional group, suggesting once more the possibility of a specific 'red glass factory'.

Intriguingly, the mixed natron and plant ash glass tesserae at Torcello can be associated with the glass used in the Byzantine mosaics of Hosios Loukas and Daphni.[147] At Hosios Loukas, the majority of tesserae analysed were of plant ash glass, some were a mixture of natron and plant ash and a few were natron glass. At Daphni, as at Torcello, most tesserae were made from a mixed natron/plant ash soda/lime glass, and it has been

argued that they came from the same place, brought by the same set of mosaicists who worked on both sites. The eleventh century is a time when various raw glass-making technologies can be observed at similar times in different places: plant ash at Durrës; high alumina at Pergamon; mixed plant ash/natron at Hosios Loukas, Daphni, Torcello and Serçe Limani.

But by the twelfth century, tesserae used in mosaics in Italy were increasingly made from plant ash glass. Such tesserae from Monreale in Sicily were opacified with quartz, a particularly Byzantine technique, rather than with tin, as with twelfth-century tesserae from Rome and S. Marco in Venice.[148] The raw glass of the Monreale tesserae probably came from the Levant, though a case has been made that it was actually made on Sicily. In S. Marco in Venice, tesserae from the fourteenth-century Baptistery mosaics are made from base glass similar to that being made in Venice at the same time, suggesting a local provenance, an argument supported by archival documents recording the making of gold glass for tesserae in 1308.[149] In the thirteenth-century mosaics of the Florence Baptistery (1260–70 and 1270–*c*. 1300), two types of base glass have been detected, a high sodium group and a high potassium group, both opacified with tin.[150] The former is typical of Mediterranean Islamic plant ash glasses from the ninth century on. The latter, however, is unlike either thirteenth- to fourteenth-century Mediterranean plant ash glass or western European wood ash glass, and does not match the limited samples available from S. Marco or Orvieto.[151] It could perhaps have been a local product, fourteenth-century Tuscan glass recipe books adding weight to a belief in a Tuscan raw glass industry. But where such a glass was produced is unknown. In the case of the fifteenth-century Last Judgement mosaic on the external west wall of St Vitus' Cathedral in Prague, although the workmen and the inspiration seem to have been Roman, the plant ash tesserae appear to have been made from local, Bohemian glass.[152] This later picture is even more incomplete and fragmentary than that of the sixth century but it does seem that this evidence for tesserae from increasingly localised sites of raw glass manufacture in thirteenth- and fourteenth-century Italy fits well with what we know of the development and growth of the glass industries, primary and secondary, in western Europe.

What lies behind the tesserae from which the archangel in Hagia Sophia was made thus provides an intricate story of manufacture and supply. Looking at the making of tesserae has made it clear that more than enough raw glass for making mosaics was obtainable throughout both the Late Roman and the medieval periods from the Levant and Egypt, whether Christian or Islamic. Glass was manufactured in large amounts for export, to be made into things – including coloured tesserae – and both raw and recycled glass was consistently shipped around the Mediterranean. In a major technological shift in the eighth century, plant ash glass replaced natron glass in the Levant and increasingly in western Europe, with evidence of its manufacture in Italy from the thirteenth century, if not earlier. It is likely that glass was coloured and opacified after being made rather than while being made, but where it was coloured is currently unknown. There is no reason that workshops for colouring glass could not have existed wherever there was demand for coloured glass and access to raw glass. It would seem logistically plausible to suggest that such workshops existed in more than one place and, perhaps, that those places were major centres for trade. If quantities of surviving mosaics are any guide, Constantinople is one possibility; Rome another; sites in the Levant a third. At Constantinople, there is some tenuous evidence for the buying and selling of tesserae; at Rome, evidence exists of specific opacifying techniques not used outside Italy; in the Levant, the

stockpiled red tesserae at Bet She'an and the evidence from Antioch imply the presence of dedicated workshops. It seems likely that certain colours – red specifically – came from specialised workshops; possibly all colours did. Old Roman tesserae were another source, used both as colourants and as tesserae in their own right. Tesserae could have been brought to sites as raw glass and coloured *in situ*, as coloured glass (perhaps in the form of cakes) or even as tesserae. Where gold glass was made is unclear, though by the fourteenth century there were factories in Venice, and evidence from Orvieto suggests that, as with coloured glass, it could be manufactured on site. The material from Orvieto, in fact, reveals a series of changing markets and the acquisition of supplies from a variety of sources: ideally the materials, both raw and coloured glass, came from as close as possible. Mosaicists in Italy in several periods appear to have obtained their supplies from more than one location (either that or the centres for tesserae-making held mixed supplies – also plausible). It is also clear that mosaicists did not mind mixing their materials, which is understandable: their job was to get the mosaics done with whatever tesserae they had access to.[153] Changes in materials were related to practical needs; the origin of the tesserae was irrelevant.

At no point can it be assumed that mosaic tesserae or even the glass for tesserae necessarily came from Constantinople or the Byzantine Empire. There is considerable evidence for glass-making in the Levant, Christian and Muslim, throughout the Late Antique and medieval periods, little evidence for glass-making from Byzantium and none at all for primary glass-making from Constantinople. Nor is there any real case for presuming that all tesserae at all times and in all places came from Byzantium. The finished, coloured tessera in the mosaicist's hands is at least two stages away from the manufacture of the actual glass and the colouring and cutting of tesserae could have taken place almost anywhere in the Mediterranean world, from centralised 'factories' to individual workmen at individual sites. There is no reason why coloured tesserae for mosaics in Italy could not have been coloured and cut in Italy, though their glass came from the Levant; similarly, with the Levantine world a continuing centre for glass production, raw and manufactured, it is clear that the tesserae used in the Arab world could as well have been made or reused there as anywhere else. As they emerge, more detailed analyses of mosaic tesserae will enable us to piece together the histories of mosaic on the wall, from the origin and supply of materials to the organisation of workshops and mosaic practices. The fluidity of the medium suggests a world of trade and artistic exchange that is perhaps more widespread, open and flexible than we have imagined. How far this material can then go on to be used to consider trading patterns and political, ideological and historical situations remains to be seen.[154]

Chapter 2

MAKING MOSAICS

In a small dark church in Cyprus, the solemn figure of the Mother of God looks over the iconostasis (Fig. 11). Her red robes glimmer against the gold background of the mosaic; and she is flanked by two grave and gloriously peacock-winged archangels, Michael and Gabriel, holding translucent blue glass orbs in the palms of their hands, and bearing staffs. Her Child holds centre stage, highlighted in gold against her red, his pose and appearance serious, intense, that of an adult. Above Mary's head is the inscription *Hagia Maria* (*Holy Mary*), and above that, in the centre of the arch of the apse, is a gold cross in a blue mandorla. This is flanked by formal, elaborate ornament – vases, acanthus leaves – in greens, blues and whites, meeting a band of red, jewelled decoration, carefully framing the scene.

The mosaic is relatively small but it is spectacular: the colours – gold, red, silver – indicate that patron and artist had access to the costliest materials of mosaic. But nothing is known about it other than what it can tell us itself. The church in the small village of Kiti is known as the church of the Panagia Angeloktistos, the All-Holy, built by angels, which is surely a comment on the mosaic. Its date is uncertain. Much of what remains now is believed to be eleventh century, though there are later extensions to the south and west, and the mosaic itself has been dated to almost every period between the fifth and twelfth centuries: current consensus (inasmuch as there is consensus) puts it in the fifth or sixth (occasionally seventh) century.[1] This particular debate is one to which I shall return in a later chapter. What interest me here are the questions related to how, in the most practical of terms, this stunning, beautiful and technically sophisticated image got onto the wall of the church. How did the glass tesserae from the previous chapter get converted into an image like this? What did it take to make a mosaic like the Kiti mosaic?



Figure 11 The apse mosaic of the Church of the Panagia Angeloktistos, Kiti, Cyprus, conventionally dated to the sixth century. The mosaic depicts the Mother of God and her Child at the centre, with the archangels Michael (to the viewer's left) and Gabriel (to the right).

No written evidence survives from Byzantium or the rest of the medieval world about making mosaics, and so what is said about mosaic-making here derives from a mixture of observations (a few mine, many more those of others who have worked closely on specific mosaics) and from conjectures based in part on modern methods. The biggest problem in this context is a lack of close-up examinations of the mosaics. Many of the best studies cited here derive from time spent by individuals on scaffolds in front of mosaics, looking at details that can only be seen at close proximity.[2] But equally, mosaics need to be viewed from within the building in which they are located, from the floor or galleries of the church as well as from the scaffold. Photographic reproductions of mosaics can distort the appearance of a mosaic. The Mother of God from Hagia Sophia, Constantinople, is best known as a head-on image, as if the viewer is located standing in front of it. The delicate modelling of Mary's face, her shadowed eyes, slightly flushed cheeks and small firm mouth, are clear in these close-ups (Fig. 12). In reality, however, the mosaic is viewed from the floor of the church some 30 metres below and at an acute, neck-craning angle, where at best we feel her great eyes looking down at us and see her Child dominating the image (Fig. 13). And as a result of intimate shots from scaffolding, at least two apse mosaics have been described as particularly ugly. One is the Mother of God from Hagia Sophia in Thessaloniki (Fig. 14), who (from direct photographs) has been described as squat and heavy, with a head too large for her body and with very definitely defined features, and with a cheerfully perky Child on her lap.[3] The other is the Mother of God from Hagia Sophia in Kiev, where the



Figure 12 Close-up view of the Mother of God in the apse mosaic of Hagia Sophia, Istanbul, ninth century, revealing the subtle construction of the face – for example, the use of dark colours to create the shading of the nose.

'bag-shaped modelling' of her cheeks and the solidity of her figure have been criticised.[4] Close-to and personal, these images do perhaps lack what we might call beauty. But they are very effective images from ground level in the church. In Thessaloniki, the deep curve of the apse affects the size, pose and proportions of the Mother of God, coupled with the fact that she has been inserted into the apse in place of an earlier image, limiting the artist's room for manoeuvre still further. Nevertheless, from below, she and her Child hold the stage. Kiev's Mary similarly dominates the apse, closer to the viewer than the figure in Constantinople, focusing attention on her majestic appearance. Often we focus on differences in form as signifying different artists, and so they can, but they are also a reflection of different locations and the different technical problems that mosaicists were forced to solve, problems about size and scale and lighting that confronted them every time they came to set a mosaic, because no two buildings have precisely the same architecture.

Another problem for the observer comes with the conditions in which a mosaic is viewed: the light and the state of the mosaic. Modern lighting conditions, modern window frames and modern window glass inevitably alter the ways in which a mosaic is seen by changing the amount, type and quality of light falling on the image. A mosaic seen in steady electric light looks very different from one lit only by candlelight or by light through a nearby window.[5] Lit head-on by spotlights, the Christ-Child in Hagia Sophia in Istanbul glows golden against the dark frame of his mother; when the lights are out, he appears to be wearing dull brown and the blues of her robes are much more apparent. At Kiti, the changes to the architecture of the building have changed the perception of the mosaic and altered its viewing point. The current iconostasis, different from the original which is unlikely to have been so substantial, both hides the mosaic from the worshippers in the church and restricts the amount of light reaching it. At Hagia Sophia in Thessaloniki, the Mother of God is currently hidden by a combination of the iconostasis and a very large and flamboyantly obtrusive chandelier. In SS. Cosmas and Damian in Rome, the floor of the church has been raised by some 7 metres, bringing the mosaic down to human level. The dirt of ages also makes a difference to a mosaic, as to any image. Otto Demus described 'reverse highlighting' in the mosaics of Hosios Loukas. Here, faces were highlighted in the places where one would expect to find shadows, the lines around the nose and mouth for example.



Figure 13 The Mother of God in the apse mosaic of Hagia Sophia, Istanbul, ninth century. From a distance, details of the modelling of her face are not visible, and her golden Child becomes a more dominating presence at the centre of the image.

According to Demus, this was to deal with the particularly bright lighting of the vault in which these mosaics were placed.[6] But this mysterious effect turned out to be the result of dirt: now that the mosaics have been cleaned, there is no trace of reverse highlighting. Similarly, whilst the mosaics of the Church of the Nativity in Bethlehem have only been known as dingy, blackened images, their cleaning and restoration between 2015 and 2016 revealed that they were actually splendid in materials, detail and colour. And of course, throughout their histories, mosaics have been repaired, restored and replaced. Almost every mosaic still in situ has, on at least one occasion, and generally on several, been restored, with greater or lesser levels of competence. Good restoration can be almost impossible to detect from a distance; poor restoration is sometimes all too distressingly clear. Ernest Hawkins memorably described the mosaics at Nea Moni, restored in the early twentieth century, as having been 'hung out in lines like washing', all their modulations, lumps and bumps flattened out.[7]

HOW TO MAKE A MOSAIC

It is clear that the basic method for putting mosaics onto walls did not really change throughout the Roman and medieval periods (Fig. 15). Essentially, a scaffold was erected, coarse plaster was laid on masonry and finer plaster placed on top of that. This plaster was often painted, and then the tesserae were stuck in (see Fig. 16 for a sketch of this progression).



Figure 14 View of the Mother of God in the apse mosaic of Hagia Sophia, Thessaloniki, eleventh century. From this distance, she appears less 'squat' than critics of the mosaic have said. It is also possible to see traces of the earlier cross over which she has been superimposed – a constraint on the mosaicist's space to manoeuvre.

Within this elementary technique, considerable variations were possible. I have already said that what a mosaic was made from conditioned its look, but the practical techniques of mosaic-making – how it was made – also affected a mosaic's overall appearance. A mosaic is made by placing blocks of pure colour next to each other; every colour is affected by its adjacent colours and the effect of mixing or shading happens not so much within the image itself but directly in the eye of the observer (it is a similar technique to that employed by the nineteenth-century Pointillists). The type of material used can make a difference; the ways in which the tesserae are laid, even the depth to which they are laid, as well as the distance from which they are viewed, can all affect what we see in a mosaic. The mosaicists' skill lay in putting together all of these elements to create an effective image.

How a 'good' mosaic is defined is a matter of some controversy. Often, its style and its relative 'Byzantineness' have been used as the key factors and a 'less good' mosaic, such as the Kiev Mother of God, put down to the work of inferior artists. But this has tended to underplay the problems of the location of an image in a church, how the architectural space available has influenced the mosaic, which is a major consideration, one relevant to any mosaic in any building. At Kiti, for example, the effect of two visual issues created by the architecture, the concave shape of the apse, and the visual contraction that affects the viewing of a figure made on the receding side of a conch when looked at from the centre, needed to be counteracted by the mosaicists. They did this by making the archangels wider in relation to their height than they would need to be if they were



Figure 15 Tesserae 'on the wall', showing the layers of plaster, the underpainting and the unevenness of the surface of the mosaic. Detail of the Adoration of the Magi, a detached panel originally from the Oratory of Pope John VII in Old St Peter's and now in S. Maria Antiqua, Rome, seventh century.

depicted on a flat surface, something that a head-on photograph might suggest is an error in their making.[8] Similarly, the curve of the apse at St Catherine's on Mount Sinai is so steep that, from certain angles, Christ in the centre can look distorted and almost hunch-backed; but from in front, which is where he was viewed, he has been constructed to look effective and commanding (see below, Fig. 86). An emphasis on style has also tended to underestimate the technical skills employed by the mosaicists in setting the tesserae and has not always paid sufficient attention to how the image appears within the church. Although I will go on to talk briefly about some of these skills, the techniques employed in making mosaics really need a whole book to themselves, based on a level of detailed recording that does not exist for most medieval mosaics.

Stage 1 Preparing, Planning, Plastering and Underdrawing

Even before plaster was applied to the walls, a considerable amount of planning and logistical work was required to prepare for making a mosaic. Sequentially, the mosaic came after the building, but preparing for it could not wait until after that construction: obtaining the glass, either for or as tesserae, almost certainly demanded its import, often from the Levant or Egypt, and that took time. Once it arrived, the glass might need colouring or turning into tesserae, grading, sorting and storing. Tools, furnaces, fuel, accommodation, supplies and workers, from mosaicists to glass cutters, plasterers to labourers, would all be required. Waiting to set these aspects in place after the building was completed would have added weeks and months to the construction process.

Then there is the question of planning the mosaics: when were they planned, by whom and how? It is assumed that patrons had a voice, though it is not known how big a role they took in designing the mosaics: it presumably varied, depending on the patron and the building. The relationship between the architect and the mosaicist is also not understood, and how far they may have worked together is unknown. This is frustrating because the relationship between wall mosaic and architecture is a close one: the mosaic is subservient to the shape of a building and affected by the different angles of surfaces within the building, as well as by the lighting of the building, in the form of windows and doors. Indeed, one of the phrases used for good mosaic is that it forms a sort of skin on the walls of the church, moving as the light in the church moves, never still, forever changing in

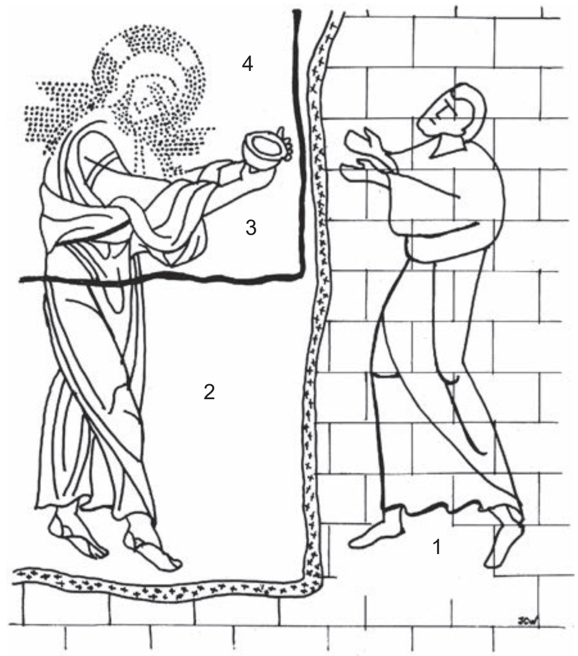


Figure 16 Stages in making a mosaic: 1 sketch on the masonry; 2 painting on roughcast plaster; 3 painting on setting bed; 4 finished mosaic.

appearance, sparkling. But how far this was a deliberately engineered effect and how far it was more fortuitous we cannot be certain. Mosaics worked well on curves: carefully constructed squinches and pendentives; apses; domes; even on flat surfaces if deliberately undulating setting beds were employed. If this sort of architectural articulation was deliberate for the benefit of the internal decoration, then it may well have been the case that architect and artist worked together (or even were the same person).[9] Elsewhere, when the mosaics are jammed into tight and inappropriate spaces, it seems that mosaicists had to fit their decoration to the architecture they were confronted with, or even alter it.[10] At Torcello, for example, windows on the west wall were blocked in order to create the space for the massive Last Judgement mosaic. As the role of the architect changed, so too must have the relationship between builder and artist. Since a basilica could be constructed through a ruler and compass and the use of basic geometry and numerical ratios, the formally trained well-educated 'architect' of the Roman and Late Antique period seems to have become increasingly a 'builder', working on site, using his own expertise.[11] My feeling is that, as with almost every other aspect of building and making, with mosaics things tended to be done on an ad hoc level: in some cases, architect and artist might well have been the same; in some cases, improvisation might have been needed. Much would depend on when planning started, what materials were available and who was going to do the work.

Nonetheless, presumably some thought was given to the layout, design and contents of the mosaic, to be sure that it fitted the space for which it was intended and displayed what was required: what went into the apse, nave, aisles and narthex in a church, which scenes fitted the different architectural spaces available – straight walls, squinches, vaults, soffits, pendentives, domes – and which saint should go where.[12] A cross in a conch, for example, can be horribly distorted because of the problems of showing its straight arms on a curved surface, so it is a bit surprising to find the scene of Christ's Deposition from the Cross at Nea Moni located in a squinch



Figure 17 Deposition from the Cross in the naos of Nea Moni, Chios, eleventh century. The arms of the cross are awkward and less effective than the arms of the cross in the scene of the Crucifixion to the left.

below the central dome. It has not been successfully laid out: the arms of the cross curve in all the wrong places and appear almost to fold back into the scene (Fig. 17). At Hagia Eirene, in contrast, where the apse is filled with the outline of a black cross on a gold background, the mosaicist made sure that the arms of the cross were not laid horizontally, with the result that the cross arms *look* straight (Fig. 18). Images in domes and semidomes confronted artists with issues of foreshortening that could not always be solved. At the Martorana, in twelfth-century Sicily, the steepness of the dome forced the mosaicists to position the archangels as if they were crawling around it, a pose brought on by the architecture, not artistic ineptitude (see below, Fig. 145). Flat walls change the effect of mosaic, taking away sparkle and reflectance but replacing them with brilliant colour. On the huge flat walls in the immense twelfth-century cathedral of Monreale in Sicily, the vast expanse of mosaic has an overwhelming effect of a tapestry-like colour and brightness (Fig. 19). The scale of the mosaics must also have been a factor here: making Christ at the size he is in the apse there would have presented a challenge to any mosaicist and perhaps goes some way to explaining the way in which the figure is constructed with a series of repeated garment folds (see below, Fig. 149). So the size and structure of the building would have been a key part in the planning of the mosaics.

Viewpoint may have been another concern. Images may, or may not, have been designed to be seen from particular points in the building. At Daphni, despite the number of photographs that show the mosaic of the grim Christ in the dome from directly below, the viewing point that the dome was designed to be seen from is actually under the centre of the arch from the inner narthex, the point where the worshipper steps out into the nave.[13] At Arta, the dome becomes visible under the lintel of the narthex door and there is a very steep sight-line, which may have



Figure 18 The cross in the apse of Hagia Eirene, Istanbul, eighth century, is not laid straight but appears straight from a distance.

influenced the wide diameter of the Pantokrator (Fig. 20). At certain points in the church, the top of the dome is cut off from sight. To see all of the apse mosaic of S. Maria in Trastevere, the viewer needs to be between the eighth and ninth columns of the colonnade, in the privileged space of the canons' choir.[14] Some mosaics are in dark and poky buildings (those from the sixth-century monastery of Mar Gabriel for example), and here the colours of tesserae make a difference. The use of silver at Mar Gabriel may have been a bid to counteract the shadowy conditions. Others seem too small and high to have been viewed properly (the Old Testament scenes in S. Maria Maggiore in Rome, for one, or the scenes of the life of Christ at S. Apollinare Nuovo in Ravenna). And finally, patrons may have had a say in the layout, wanting their particular saints in particular places, special images of Christ and his Mother at key points, a specific selection of



Figure 19 View of the interior of the Cathedral Church, Monreale, twelfth century. Although the high straight walls of this church flatten out the mosaics, the overall effect of gold and colour creates a tremendous visual impression.

scenes. At some point, some sort of planning must have taken place, but quite when and how and in how much detail is unknown.

The first stage in making the mosaic came once the building was constructed and the architecture was able to weight-bear: plastering. The ground for mosaic was laid in two or, more usually, three layers of plaster onto the masonry.[15] The depth of plaster varied considerably, in places between 5–10 cm thick, in others 2–3 cm. The depth was affected by the type of masonry and by the architecture on which it was placed.[16] Because mosaic cannot be used to form a sharp angle, all joins and angles where mosaic was to be applied needed to be smoothed off and rounded into a shape sometimes described as a 'bull nose' (this is visible in almost every mosaic where two walls meet, and could also be used to create concave and convex forms on top of the masonry, and even to break up the flat contours of walls, making them uneven and lumpy: Fig. 21).

The first two thicker layers were formed of a rough lime plaster (Fig. 22). This was aggregated with sand and often strengthened through mixing in chopped straw to retain humidity and stop the plaster from drying out too quickly, and with crushed brick or pottery to waterproof the surface.[17] In preparation for the weight of tesserae, flat-headed iron nails and clamps were often placed in the plaster to secure it better. Damage to mosaics has frequently occurred when these clamps have corroded and shattered. Then the two underlayers were both usually keyed or gouged and indented ready to receive the final level, the setting bed, of a fine lime plaster. At Hagia Sophia in the dome, the sixth-century setting mortar was formed from a mixture of lime, marble powder and probably egg white; at Orvieto, crushed red tiles and a lot of oil were added to the setting bed plaster to keep it from drying out.[18]

Each mosaicist or team of workers doubtless made their own decisions on how much of the roughcast could be rendered in one plastering.[19] With a large team of workers, several areas of the setting bed could be worked on at the same time, for example plastering the top and starting work setting and then plastering the bottom, or plastering the whole wall and starting work top down, bottom up. At Kiti, vertical lines are apparent in the gold background on either side of the Mother of God. The scale suggests that these may well represent joins in the roughcast plaster rather than the setting bed plaster. It is likely then that work moved from the top down, across the mosaic. This would explain the horizontal line apparent across the mosaic on the viewer's right, where the straight line of the archangel's staff, one black and one gold tessera, suddenly goes out of alignment (Fig. 23).[20] In the panel of the Deesis in the Room above the Vestibule in Hagia Sophia, the joints of the setting bed may indicate that each figure was set separately.[21] At the Chora Church in Constantinople (now known as the Kariye Camii) there is a conspicuous crack or join in the huge Deesis panel (it is 4.81 × 4.32 metres) next to the west door of the church in the inner narthex (see below, Fig. 24). This effectively divides it in two vertically, which may represent two phases of work, the larger some 9 metres square.

Once the wall or vault was plastered, it could then be underdrawn and the tesserae set. The dampness of the plaster, or rather, its drying speed, affected how much plastering, underdrawing and mosaicking could be done in one go. However, we have no idea how long any of the plaster layers took to dry: the lower layers may have been designed to retain moisture for all we know. There is a tendency to see the setting bed as functioning rather like the top level of plaster in later Italian fresco painting and therefore involving small areas that could be worked in a specific short period of time (typically a day), but this was not necessarily the case. David Winfield observed that, insofar as they can be detected, the plaster



Figure 20 View into the dome of the Church of the Paregoretissa, Arta, thirteenth century. The width of the image of Christ Pantokrator in the dome may be a reaction to the very steep sight-line caused by the architecture of the building.



Figure 21 'Bull-nose' curve smoothing the angle where two walls meet: detail from the apse of S. Lorenzo *fuori le mura*, Rome, sixth century. A single line of gold tesserae is visible at the top of the curve, joining the jewels.



Figure 22 Detail of masonry, clamps and plaster layers with mosaic from the apse of Hagia Sophia, Istanbul, ninth century.

patches in Byzantine wall painting tend to be considerably bigger than those of Italian fresco painting, with large joins along the borders, often marking the extent of the scaffold.[22] He noted from his own experience as a conservator that, in Cyprus, a plaster which appeared to remain fresh for a week in winter dried off in 24 hours in summer; but that on the Pontic coast of Turkey (for example, at Trebizond), there was little change in the drying time with the seasons: the Pontos is a damp area with high humidity. The nineteenth-century Athonite wall painter Father Joseph let plaster dry for three days before beginning to paint on it, but no longer because then it became too dry to absorb colours, suggesting that plaster could stay wet for some time.[23]



Figure 23 Loss of alignment in the lower half of the Archangel Gabriel in the Church of the Panagia Angeloktistos, Kiti, Cyprus, conventionally dated to the sixth century. About two-thirds of the way down, the black and gold lines of the angel's staff go out of sequence and the fold lines of his robes do not quite match up.

So it seems plausible that the plaster for mosaic took a considerable time to dry and could thus have been laid in large sections and worked on for several days.

An intriguing snippet of Latin text preserved as a part of a Carolingian grammar and vocabulary book of the eighth century offers food for thought.[24] The section is headed 'A mixture of lime and sand for making a mosaic' and goes on to say:

> Take a quantity of fresh, well washed and sun-dried lime and add one third of the same quantity of sand. Mix with oil. In the absence of oil use meat juices.[25] When this mixture has been applied to the wall, let the tesserae,[26] in accordance with the judgement of the painter (*pictor*),[27] be subsequently pressed[28] into that mixture while it is moderately soft.[29] (At the outset however let images or any other shapes be drawn[30] on the bare wall.)[31] Next in accordance with the wishes of the craftsman (*artifex*) let a small part be clad[32] – or even as much as he wishes to complete within the actual (?) hour.

Where this recipe originally came from is unknown: it may belong to a text similar to works such as the eighth-century *Compositiones variae* or the *Mappae clavicula*, with their recipes for making coloured glass, a seeming combination of 'craftsman's handbook' and alchemical recipe book (and it is probably only we who draw that distinction). It indicates drawing straight on to the wall, followed by plastering and then the insertion of tesserae. No distinctions are made between different levels of plaster, though the author suggests plastering as much as the craftsman wants to complete in a certain time. Two different words, *pictor* and *artifex*, are used, perhaps a distinction between 'painter' and 'craftsman', but how far the two had distinctive roles is not totally clear: the text suggests that the *pictor* judged the application of the tesserae to the wall (does this mean he instructed or simply picked the right moment?) while the *artifex* decided how much could be done in an hour (does this mean he was the person sticking the tesserae in?).

Before moving on to consider how a mosaic may have been set and the technical devices that formed a part of that setting process, I want to consider briefly two aspects that relate to the planning and preparation process, something that the Latin text hints at in its mention of 'drawing on the wall'. These are the nature of underdrawing and underpainting, and the question of sketch and model books. The terms 'underdrawing' and 'underpainting' tend to be used interchangeably of mosaics. This is in part because it is unclear whether the painting often



Figure 24 The Deesis panel in the inner narthex of the Chora Church (Kariye Camii), Istanbul, fourteenth century. The heavy and detailed underpainting is very clear.

found on the setting bed was designed as a guide for setting the tesserae or whether the bed was coloured for deliberate visual effect, and in part because it is almost impossible to tell if a sketch ('underdrawing') or a detailed set of paintings ('underpainting') was present under a mosaic since it is not possible to see underneath either the mosaic or the setting bed. Generally, it seems that the former was more common and so here I have only used the term 'underdrawing'. Such work seems to have taken place inconsistently and on different layers of plaster, and its function in mosaic-making is not certain. Some underdrawing directly onto the masonry survives from S. Apollinare in Classe, from the Rotunda in Thessaloniki, from S. Lorenzo in Milan and from Monreale. But here and elsewhere, this painting forms a very preliminary sketch, almost a try-out, and is often different from the final design. In the case of the apse of S. Apollinare in Classe, the rough sinopie applied directly to the wall depicts birds: these were replaced by lambs in the rough sketch on the layer of plaster above, and it is lambs (or sheep) that appear in the mosaic itself.[33] There are only a tiny number of examples of underdrawing known from the bottom plaster layer. At the Chora Church, one rough sketch was found on the first rendering: this may have been an underdrawing for the mosaic but it is possible that it was a study in situ to help the painter and client decide what should appear there.[34] Similarly, at S. Marco, in

the scene of Cain and Abel, the sketch on the roughcast plaster does not match the underdrawing on the setting bed or the mosaic above that.[35]

It is a different matter when it comes to the setting bed. Here, underdrawing is recorded from many mosaics. This underdrawing can be detected in mosaics at points where the tesserae have fallen off the wall or through a study of the gaps between tesserae. It was used to different extents and incorporated greater or lesser amounts of detail in different mosaics and at different sites: it might show whole figures in detail or sketched figures or simply areas of colour.[36] At Poreč, the underdrawing, where it can be detected, seems generally closer to sketches than full-blown images. The main colour used is a red ochre, but yellow, purple, turquoise, grey and pink were also used. Similarly, at Lythrankomi in Cyprus, the underdrawing seems more of a layout of design than a detailed plan; it was clearly done rapidly in a 'broad manner' and the final drawing and colouring in mosaic did not always match: for example, often where black paint was used, mosaic colours were set.[37] At Nea Moni too, the underdrawing is in black, yellow and red only and is more of a sketch than a painting.[38] By and large, these ochres and blacks, earth colours, were amongst the cheapest of pigments.[39] In contrast, in the third-century Christ Helios mosaic in the Tomb of the Julii under St Peter's in Rome, much of the detailed vine scroll pattern visible is actually the underdrawing, or better in this instance, underpainting, where the tesserae have fallen out. In the fragments that remain from the Oratory of Pope John VII in St Peter's, the flesh of hands and feet appears to have been set before the outlines, suggesting the existence of a reasonably detailed underdrawing.[40] Similarly, over five hundred years later, the heavily painted setting bed now visible in the Deesis panel at the Chora indicates that the underdrawing there was very detailed: it may even have been a painting rather than a sketch that was mosaicked over (Fig. 24). Examinations in Istanbul in Hagia Sophia, for example in the Room above the South West Vestibule (ninth and tenth centuries) and the Zoe and Constantine IX Panel (eleventh century), at the tenth-century church of Constantine Lips (Fenari Isa Camii), at the Pammakaristos Church (the Fethiye Camii), at Vefa Kilisse Camii and at the Chora (all fourteenth century) have revealed a considerable painting of the setting beds, with no areas left as bare plaster.[41] Underdrawing was also used extensively in the mosaics of the twelfth-century Church of the Nativity in Bethlehem.

On occasion, the drawing itself and the white or painted plaster might actually form a part of the mosaic. In the panel depicting the Emperor Alexander of 913 in Hagia Sophia, Istanbul, light brown paint is visible in the irises of Alexander's eyes, purple and green in his beard; the tip of his left thumb is left in purple; and the setting of his right hand is particularly interesting. Here, the right thumb and palm are supposed to be seen through the orb he holds, and they are left in paint.[42] These painted details are only visible in a close-up detailed inspection: they do not interfere with the appearance of the mosaic (indeed, in Alexander's case, they can be said to enhance it). Similarly at the Pammakaristos Church, in the fourteenth-century mosaics, areas are painted rather than plastered – the feet of John the Baptist for example (see below, Fig. 30). It is more likely that such areas were deliberately either left in paint or painted especially because it was easier, either in technical terms or because the necessary tesserae did not exist, or to economise on materials (why waste tesserae where it would not be noticed?) or time (why not speed things up especially in tricky areas and especially when no one would detect anything?).

More generally, painting the plaster of a mosaic avoided white interstices between tesserae. In many mosaics with a gold background,

the plaster below is painted in either yellow (Hagia Eirene, Poreč, Hagia Sophia, Istanbul in the tenth-century repairs to dome mosaics for example) or red (Lythrankomi, Hagia Sophia, in the sixth-century mosaics, Nea Moni and the Chora). There is not enough evidence yet to be clear whether the colour changed over time, but the reason is usually said to be that the painted background gave extra depth to the gold tesserae.[43]

However, the most important aspect of underdrawing may have been to guide those responsible for setting the tesserae of the mosaic, mapping out the design in effect. This underdrawing was joined to the use of guidelines, snapped, scratched or marked by a compass onto the plaster, which would have served as well as a plan for envisaging the location and spacing of scenes.[44] In wall painting, such devices were used to speed up planning and sketching: incised outlines were used to define limits to architecture and background features, to mark the shoulder lines of figures (for the width of a body is determined by its shoulders) and to define complicated overlaps in groups or tricky garment folds; compasses were used for marking out haloes. Such preparatory work, plotting the actual location of figures and elements of the scene and overall programme, also helped in adjusting any visual distortions caused by the location of the scenes and so considerably speeded up the painting process. It seems hard to believe that the same strategies would not have been used for laying mosaics. Setting tesserae is precise and there is no real scope for the modifications and adjustments that form a part of painting. Once the tesserae are set, changing them is not simple. Consequently, the questions about the speed at which the plaster layers dried become even more significant. If the plan of the mosaic was worked out on the setting bed, then painter and mosaicist alike would have had to work fast enough to apply the paint and then the tesserae before the plaster of the setting bed dried and became unworkable. Both must have worked very swiftly.[45] Without any other form of underdrawing, it is even conceivable that whole scenes were never sketched out on the wall at once, but were worked on bit by bit, and that the first time a whole scene was visible was when the mosaic was completed, a rather startling idea.

This issue of planning gets us to questions about sketch and model (or pattern) books – the distinctions between these are often blurred. I suggested above that underdrawing served as a guide to the artists and could also be an intrinsic part of the actual physical appearance of the mosaic. It may also have been the stage at which the designs for the images were worked out and, possibly, vetted by the patron. But these ideas may also have been decided earlier in the process. The idea that model books (which may or may not have also been sketch books) existed and were influential in the planning of mosaics is a long-standing and tenacious one. It is a concept that seeks to explain how an image seen at one site might have travelled to another site, reappearing there almost identical in its form. The modus operandi seems to be that some artist copied an image or a garment fold or a gesture into his sketch book and took the design with him to use himself or to pass on to others, at which point the sketch book became a model book.[46] Kitzinger, for example, used model books to explain the similarities between the mosaics at Monreale and those at the Cappella Palatina. At S. Marco, the cycle of scenes in the atrium of the Creation of the World and the story of Joseph from the Book of Genesis are very similar to the miniatures in a fifth/sixth-century Late Antique manuscript, the so-called Cotton Genesis, similar enough that the manuscript has been seen as the actual model book for the mosaics.[47] But in practical terms, what might these ideas mean? That in Venice the mosaicists had the fourth-century manuscript up on the scaffold and sketched

out scenes? That they transferred elements from the manuscript to their sketch books and then took those up the scaffold? Or that they were familiar enough with the manuscript or something like it to translate its images into the idiom of mosaic? In practical terms, model books, if made from parchment, must have been both expensive and bulky, and so not necessarily the best tool for an itinerant workshop of mosaic-makers. In artistic terms, they suggest a mode of production that is essentially mechanistic and based on copying. I do not really believe that artists used these books as pattern books either, to show patrons and thus inspire them to choose the latest fashion in art. Nor, in terms of getting images onto the wall, is there any surviving evidence to suggest that mosaicists (or wall painters) in the Middle Ages used life-sized cartoons of the sort developed in fifteenth- and sixteenth-century Italy.[48] The earliest use of such cartoons in painting seems to come from fourteenth-century Italy.[49] At Orvieto in the fifteenth century, preparatory drawings were used either for contractual purposes or possibly as cartoons, but the earliest surviving cartoons to scale for mosaics are those designed by artists such as Titian and Tintoretto a century later.[50] What happens with these cartoons for mosaic is that a very clear distinction emerges between the designer, working on the ground in paint and paper, and the setter of the mosaic, working with the tesserae, a division that may, or may not, have existed in the Roman and medieval worlds.

So how might mosaics have been planned? It is possible that plans for the design were worked out in advance, perhaps on vellum or in sand trays, though these then present the problem of scaling them up to size. A pragmatic solution may be the best: sometimes there were no drawings, sometimes there were some, but these may have existed in an impermanent form that was cheaper than wasting parchment. It is not implausible that an experienced mosaicist could have carried the subject matter in his head and been able to sketch out the plan directly onto the actual space within the building without an intermediary.[51] The difficulties in composing a scene can be overestimated, for the basic iconography of many mosaic scenes is largely unchanging and constant.[52] A Nativity required the same fundamental cast of characters wherever it was: it was more an issue of fitting it into the size and shape of the wall space in each case. So it would seem reasonable to suppose that a part of an artist's training would be in how to plan and draw freehand onto the walls. In this context, a medieval artist might have had two tools that we have underestimated. One is the use of rules of relative proportion, which had existed and been used since Vitruvius and which were employed in the Italian Renaissance. These allowed artists to scale up (and down) their images easily and painlessly: one plausible, simple ready-reckoner uses nose and head lengths as the basic measures for proportional representation.[53] The second is memory. A great deal has been written about the art of memory in terms of texts, but rather less has been said about the potential for a memory of and mnemonics for images.[54] Here, what may have slipped through the net is not copying but practising, the art of making a quick sketch of a garment fold to remember it or to try it out. Cennino Cennini, writing in the fifteenth century, stressed how important it was for artists to draw, to copy, to sketch, all in order to increase their skill through practice.[55] What little evidence we have for actual artistic practice suggests the importance of repetition and a decent teacher ahead of a concern with models and ancient illustrations.

Furthermore, each artist would have worked in his own way: where one could have taken care to lay things out, incise guidelines, even write notes, another, even within the same mosaic, might just go for it, freehand. Irina Andreescu-Treadgold has shown at Torcello how two mosaicists

working to left and right on the scaffold worked independently and adopted different solutions to fit figures in the spaces they had to fill.[56] The inevitable corollary of this would be that there are places where mosaics do not match up perfectly, where adjustments have had to be made, and where materials change slightly – I have already mentioned the unaligned angelic staff at Kiti. These tweaks tend to be most easily detected in ornamental borders. At Poreč, the scallop shells around the apse mosaic vary in both materials and techniques. On the west wall of Torcello, the tone of the green glass from the left and right of the Deesis changes.[57] Such careful observations reinforce the idea that mosaicists worked relatively independently of each other, following a schema but adapting to what was in front of them as they worked, devising solutions as they went along, rather than blindly following a plan or a detailed underdrawing.

Both the physical architecture of a building and the shortcomings of the human agent could and did affect the layout of an image. In the case of the sixth-century mosaics at Lythrankomi on Cyprus, the irregular area of the apse conch was dealt with by the mosaicist who framed it within a uniform border, thus holding the image together, and then treated the area inside the border as two distinct parts: the main composition in the inner conch and the border of apostles as if it were the soffit of a separate arch. This meant that the change in curvature of the conch was masked. The result is that the apostles border is arranged so that the portraits can only be seen without distortion from either side of the apse whilst the Mother of God has to be viewed from the body of the church.[58] The two parts, border and central image, are barely related (see Fig. 87). At Poreč, the mosaicists, whilst having a symmetrical design in theory, almost always messed up in practice, getting the spacing consistently out, with the artist overestimating the space and running short at the end.[59] Christ on the triumphal arch and Mary and Child in the apse are off-centre (Fig. 25). However, this was not simply down to the mosaicists; in fact the architecture of the church itself is not symmetrical. The apse and the arch are not perpendicular to each other and the curve of the apse on the right side does not extend as far as the curve on the left. The ninth-century mosaic of the Mother of God in the apse of Hagia Sophia has the wrong dimensions and proportions (Fig. 26). Her feet, apparently, are too small 'even by normal standards', her head is too small in relation to her total height; her right hand is smaller than her left hand; the Child's feet are too big for his body which decreases in size as you go up it.[60] All of these criticisms are very clear from close up and it seems that the optimal viewing point for the mosaic, the point where these proportions become almost normal, would be from directly below the mosaic, looking straight up at it, as you might with the lowest level of an image in a dome. This was perhaps where the mosaicist had been on the scaffold designing the mosaic, but it was a vantage point inaccessible to the general worshipper.

However, although these images are not perfect, how significant this was in the viewing of the mosaic is another matter. The off-centring at Poreč is not the most noticeable aspect of the apse mosaic; and it is almost impossible to see the defects in the Hagia Sophia Mother of God from the floor of the church; rather the issue is her overall size: despite the scale of the mosaic, she is dwarfed by the size of the church. The Kiti joins and the scalloped borders at Poreč? To a great extent, distance renders this sort of detail almost irrelevant. This gave the mosaicists considerable leeway to take short cuts, skimp on materials, even bodge jobs, suggesting that speed may have been valued above invisible accuracy.



Figure 25 View of the apse of the Eufrasian Basilica, Poreč, sixth century. Christ on the triumphal arch and the Mother of God in the apse are both off-centre, but this is barely noticeable.

Stage 2 All in a Day's Work? Setting (and Bodging) a Mosaic

Where it existed, underdrawing allowed the artist to cope with the double perspective involved in making mosaics – working close to at an image designed to be seen from a distance – and to get a sense of how the overall design would fit on the surfaces available to it. But having planned and sketched (or not!) and plastered a suitably sized area, the final act was to put the tesserae in. The creation of a mosaic requires the manual insertion of thousands or millions of small tesserae. It seems likely that the making of these tesserae was the most demanding (and tedious) of the many tasks around mosaic-manufacture. At some point, they had to be cut in their millions from glass, stone, mother-of-pearl or pottery, and sorted, presumably by colour, medium and size, since all of these factors would play a part in the making of the mosaic. In the case of the third-century wall mosaics of the Baths of Caracalla, Janet DeLaine estimated that twenty tesserae could be cut per minute or 14,400 tesserae per man-day (one person's working time for a day, taken as 12 hours, i.e. in 12 hours one man could



Figure 26 The Mother of God and Child in the apse mosaic of Hagia Sophia, Istanbul, ninth century. This is the most frequently reproduced view of Mary, from head-on on the scaffold erected by the restorers in the 1960s. It reveals the distortions in the figures, such as the over-large right hand of Mary and Christ's big feet, but these become irrelevant from the floor of the church – see Fig. 13.

produce 14,400 tessera). Cutting the tesserae for the glass wall mosaics of the Baths would thus have taken 176,388 man days.[61] This is perhaps the area of labour that would have been the most wearisomely time-consuming, but critical to the final result. On the scaffold, each mosaicist is presumed to have had with him the requisite buckets or bowls of tesserae, appropriately sorted for the section of mosaic he was about to work on, replenished when necessary. The sizes and shapes of medieval tesserae are generally reasonably uniform (as Table 1 illustrates),[62] but it seems increasingly to have been the case that larger tesserae were used for backgrounds and smaller ones for areas of detail and above all for faces, hands and feet. Some tesserae might be triangular, some sliver-shaped, and tesserae vary in size and thickness. In the thirteenth-century

Table 1 Relative sizes of mosaic tesserae

Church	Date (century)	Gold tesserae	Tesserae of faces (smallest tesserae)
Rotunda, Thessaloniki	4th?	5–7 mm^2	3 mm^2
Panagia Kanakaria, Lythrankomi	6th	10 × 8 mm	4 × 4 mm
Hagia Sophia, Constantinople tympanum saints	9th	6 × 8 mm	2 × 6 mm
Hagia Sophia, Constantinople apse	9th	5 × 6 mm	3 × 3 mm
Hagia Sophia, Constantinople Alexander panel	10th	6 mm^2	Not given
Hagia Sophia, Constantinople Zoe and Constantine panel	11th	5 × 6 mm	2 × 1 mm
Nea Moni, Chios	11th	8 mm^2	4 mm^2
Hagia Sophia, Constantinople Eirene and John Komnenos panel	12th	2 × 3 mm to 10 × 10 mm	2 × 4 mm to 3 × 5 mm
Pantokrator Monastery, Constantinople	12th	7 × 8 mm	Not given
Hagia Sophia, Constantinople Deesis panel	13th	3 × 4 mm to 13 × 10 mm	2 × 3 mm
Chora Church	14th	7 × 10 mm	Not given

Deesis mosaic in Hagia Sophia, there is almost unbelievably fine modelling of faces and evidence of Byzantine repairs in the form of splinters of tesserae set into beeswax.

We have no real idea of how quickly a mosaicist could work, since it is almost impossible to see joins between patches of work in a well-executed mosaic, and even harder to be sure what they might indicate. It has been suggested that a good mosaicist could set up to 4 square metres a day, though quite where this figure was derived from is unclear.[63] DeLaine made some estimates for the wall mosaics of the Baths of Caracalla and suggested that, with all the preparation, it would have taken 5.8 man-days to mosaic each square metre.[64] This figure was based on a series of estimates: that a roughcast layer of some 7 cm thick would take 0.4 of a day per $metre^2$; whilst a setting bed at 1 cm thick needed 0.05 of a day per square metre, and half this in addition for an assistant. If time was needed for sketching the design, then a higher figure was needed for laying. DeLaine suggested 2.8 days were needed for one man to cover a square metre of wall with mosaic, including setting beds, at the rate of one tessera every 8 seconds. Carrying the material took 0.7 man-days in total and supervision 8.6. The total unskilled labour was 31.5 man-days, with skilled at 54.9 (with supervision on top), making the total labour for each square metre 5.8 man-days. In contrast to these estimates, the contemporary mosaicist Tessa Hunkin sets perhaps 0.3 square metres of mosaic a day in her studio, a figure making the total labour per square metre of mosaic (excluding setting bed) to something closer to 3.3 days.[65] In the thirteenth century, at S. Maria Novella in Florence, Masaccio took 27 or 28 days to complete the fresco of the 'Trinità', which is about 21 square metres, a rate of just under 1 square metre a day.[66] If this is a reliable average, then it implies that mosaic could be at the very least three times slower than fresco to execute. Furthermore, mosaic-making may have

been strictly seasonal work, as glass-making was in thirteenth-century Venice. The contact of one of the mosaic masters at Orvieto made it clear that he was not expected to work in December and January on the mosaics because of inclement weather; instead, he could use that time for preparing tesserae. If this was generally the case, then it is a factor to take into account when converting days into years.

On the scaffold, the use of different shades of coloured glass or of gold tesserae could produce different visual effects, though how much of this was design and careful sorting, and how much the effect of what the mosaicist had in his bowls, depends on how much time one thinks was spent on sorting tesserae.[67] The use of different media also created different visual effects. The matt grey stone of the Virgin's throne, which has faded from its original darker grey, next to the gold background in the apse of Hagia Sophia creates an impression of the throne receding backwards and so of three-dimensionality.[68] But it can never be overemphasized how the appearance of a mosaic depends enormously on the materials that the mosaicist had available for making the mosaic and, from those materials available, those chosen for use. The sixth-century ornamental mosaics in the vaults of Hagia Sophia are characterised by an almost exclusive use of glass tesserae, with the gold tesserae placed on a red setting bed and the close setting of tesserae in neat rows. The later mosaics use stone and terracotta as well as glass, the gold tesserae are set on an ochre bed, silver is mixed in, and the tesserae are spaced wider in uneven rows. It seems likely that this reflects a change in available materials as much as it does a change in technique.

What we know about making coloured glass suggests that colours were not necessarily consistently the same, that some were harder to make and so presumably more costly and perhaps less easily available. At Kiti, the range used suggests that materials may not have been a problem. The mosaic contains considerable amounts of gold glass (background, details) and a relatively large amount of silver (the haloes of the archangels for example are set completely in silver) and a lot of red glass (the Mother of God's maphorion or mantle; the ornamental border) with no trace of paint that I am aware of. This last is particularly interesting because (as discussed earlier) red glass was always the trickiest to produce and so presumably the most expensive, and is the glass most frequently replaced in the Middle Ages by stone, terracotta or paint. So the mosaicists at Kiti clearly had access to the three top-of-the-range types of tesserae. We can only speculate where this glass came from – no analysis has yet been published of the Kiti tesserae – but given that material survives suggesting a manufactory for red glass at Apollonia on the Levantine coast, it may well be that the glass came directly from the Levant. At Poreč, there was clearly a hierarchy of materials on the basis of their cost and visual properties. The face of the patron Eufrasius was made with a range of colours in smaller glass tesserae that were not employed anywhere else in the mosaics and, of all the figures depicted, only Eufrasius and Christ have more glass than stone in their faces, suggesting both their relative importance and possibly a limited supply of certain materials. Similarly, at S. Vitale in Ravenna, the visible flesh parts in the Justinian and Theodora panels were made with glass, with the exception of two heads in Justinian's panel, those of Archbishop Maximian and the head of the man between Maximian and Justinian, which were made of stone.[69] But at Poreč, other evidence indicates that supplies ran low and that the mosaicists were forced to improvise with materials other than glass. This is most apparent in the south apse where there is considerably less glass than anywhere else, implying that this was almost certainly the last part of the mosaic to be



Figure 27 Hand of God holding a wreath, detail from the apse mosaic of the Eufrasian Basilica, Poreč, sixth century, with green glass used in place of gold tesserae.

completed. Here and elsewhere, yellow brick is used in places for yellow glass; to eke out gold tesserae, other colours have been blended in, most notably lime green: this is visible, for example, in the Hand of God and wreath at the crown of the apse (Fig. 27). Paint was widely used in medieval mosaics to highlight or complete details or to conceal the lack of a particular colour, most often the problematic red glass. This was also the case in the apse mosaic of Hagia Sophia where Mary's shoes and the buskins worn by the Archangel Gabriel (see above, Chapter 1 and Fig. 4) were made from a selection of tesserae painted red, and in the narthex mosaic of the same church, where the emperor's boots were made from white stone tesserae painted red. In Hagia Sophia, in the Room over the Vestibule, some of the decorations (for example, in the Alcove) seem more economical in their use of materials and also (though this last need not always be the case), less well executed.[70] What is clear, however, is that mosaicists were very skilled in making use of and maximising the potential of the materials that they had to hand.

Why mosaicists ran short of glass tesserae is a good question. In some cases, as at Poreč, it may indicate problems getting hold of additional supplies because of the distance from the point of supply in the Levant. It may also have been that the project was running out of money; we know

of plenty of big projects in Renaissance Italy that suffered from this. In Constantinople, it has been suggested that it indicates a lack of glass for mosaics, but why such a shortage should have occurred is unclear. But whatever the reason, in most cases the ways in which inferior tesserae were employed suggests a clear awareness on the part of the mosaicists as to what they could get away with visually when the mosaics were seen from a distance. This may well have increased the opportunities for mosaicists to make a bit on the side through the theft and resale or use elsewhere of tesserae, especially if the mosaicists themselves were expected to provide the materials, as was the case at fifteenth-century Orvieto. In this case, any short cut and saving would be a bonus. At the Florence Baptistery in the early fourteenth century, two mosaicists, Bingo and Pazzo, were caught stealing glass and tesserae.[71] They are unlikely to have been the first or the last.

Although I have suggested here and elsewhere in this book that decisions about materials and colours were driven in the first instance by what was actually available, it has been proposed that some of these uses related instead to distinctive working practices. So, for example, it has been argued that one way of distinguishing between 'Roman' or 'Italian' mosaicists and 'Byzantine' mosaicists in fourth- to sixth-century mosaics was in the use of stone, especially in the flesh areas: where stone was used extensively, it represented the work of Byzantine artists and was a deliberate choice, reflecting artistic tradition. So, for example, in the sixth-century Christological panels of S. Apollinare Nuovo in Ravenna, which he saw as a 'provincial reflection' of Byzantine art, Per Jonas Nordhagen suggested that the use of more stone on the north wall indicated the presence of Byzantine artists, whilst the greater use of glass on the south was the responsibility of those trained in the Western tradition.[72] Additionally, he proposed that the use of silver and gold tesserae in Late Antiquity was a sign of Byzantine artists. Consequently, the mosaics in S. Maria Maggiore in Rome and S. Giovanni in Fonte in Naples, which use glass not stone, were the work of Western/Italian mosaicists, whilst the use of stone in the Arian baptistery, S. Vitale and S. Apollinare in Classe, all in Ravenna, indicated Byzantine artists.[73] SS. Cosmas and Damian in Rome, which has gold and silver tesserae but no stone, suggests a less foreign influence and a vigorous afterlife for the tradition of using glass and a more dynamic mosaic-making tradition of its own. Nordhagen saw this trend as visible in mosaics from the fourth to the fourteenth centuries, and across the Byzantine world, from Constantinople and Thessaloniki to Cyprus and Sinai.[74]

These differences may indeed reflect different working practices but whether those relate as definitively to a division between 'Byzantine' and 'Western' is less certain. There is a level of inconsistency in what is defined as working in glass or stone – despite Nordhagen's point about the use of stone at S. Vitale, as I have already mentioned, the faces in the imperial panels were actually made from glass. At Poreč, the use of stone seems to relate more to a shortage of glass, and the need to improvise and cover for this, necessity rather than choice. Technological factors may also have played a part. Once quartz was used as an opacifier in tesserae employed in the Byzantine Empire, it made it impossible to make white glass, so the use of white stone here may, again, indicate a lack of glass. White glass was produced in the West, however, where quartz was not used as an opacifier, so its presence may suggest a Western source (or reuse) of that material – but that does not say anything about the artists. There is also an odd tension in Nordhagen's view which upholds the traditional view that Byzantine artists were the best and that

the materials for mosaics came from Constantinople or from the Byzantine Empire more widely, but indicates that those materials were stone rather than glass, as if stone was a more appropriate medium for wall mosaic. His observation certainly suggests that glass was more widely available and used in Italy than in the Byzantine Empire, and that is in itself noteworthy.

WORKING PRACTICES?

The insertion of tesserae in a medieval mosaic was not a simple mechanistic task: the underdrawings that survive are simply not detailed enough to allow for that. Whilst the drawing on the base plaster probably showed the overall design of the mosaic, the mosaic setter presumably decided on the shape and colour of each cube at the moment of setting. The setting of cubes in plaster is a tricky and meticulous task, requiring strict control, unlike the fluency of painting. The setter's role was to select and mix the tesserae in their different hues, tones and materials in order to create visible shapes (through outlining, for example), the balance of colours and tones (the lights and darks) and the reflection of light. Tesserae were not laid in dead straight lines, as this tends to create a formal, static and mechanical effect. Rather, the lines produced by the tesserae are important for creating visual effects. Here, the idea of preliminary drawings is again important: were painted guidelines used to make certain that the spatial distortion of space was properly compensated for by the proportional scaling of the mosaic? The distorted cross arms in the Deposition mosaic at Nea Moni (above, Fig. 17) suggests probably not always. It is likely that a variety of mosaicists with different levels of skill and experience would work on the mosaics of a particular building, indeed a specific panel. Some areas would clearly be more straightforward than others, backgrounds for example. The ways in which tesserae were laid may provide clues to mosaicists: in modern mosaic-making, *andamento* refers to the individual way in which mosaicists lay their tesserae, the visual flow and direction they create within a mosaic. Not enough is known about medieval mosaics to know if the same individuality is apparent here, but it is conceivable.

Some attempts have been made to deduce working patterns from the evidence of the mosaics. At Kiti, as I mentioned earlier, David Winfield suggested that the line running between the Mother of God in the centre and the Archangel Gabriel on the right represented a division in the roughcast plaster, and suggested that a similar division took place between Mary and the Archangel Michael.[75] Figure 28 gives a sense of how Winfield imagined this played out horizontally and vertically across the mosaic

The decoration on the arch in front of the semidome may have been divided in two, meeting at the top, thus giving five areas of roughcast with the possibility of work on two or even three areas at one time. Seeing the joins in areas of setting bed is far more difficult since any decent mosaicist should have been able to make them more or less invisible. The logical direction of work at Kiti and at other sites, including the apse of Hagia Sophia, is to start at the top and work down, perhaps with setters side by side. Since one patch continues from another, in theory there would be no reason to lose the alignment of tesserae: Winfield suggests that where breaks are visible – for example where the top and bottom of Michael's staff do not quite match; and where the fold and highlights and lines of Gabriel's staff are also slightly out of alignment



Figure 28 Suggested divisions of labour at the Church of the Panagia Angeloktistos, Kiti, Cyprus. The thick black lines indicate possible divisions of the roughcast plaster; the broken lines show suggested divisions in the setting bed. Note the break in the staff of the right-hand angel and compare with Figure 23.

(none of these is visible from the ground) – this might have been the result of poor lighting conditions or of adjustments to the scaffold to bring the setters close enough. It would have been very difficult to maintain an overview of the whole mosaic composition whilst perched on a scaffold with constantly changing level, lit erratically by whatever daylight was available plus flickering candles and lamps.

At Kiti, Winfield also considered the numbers of possible subdivisions and the time required to set them. He suggested that there were five subdivisions in each angel, six in the Mother of God, and two on each side of the decorative work of the arch. The background (a task perhaps for an apprentice setter) might have been made of four sections, plus one more for the inscription. As a result, there are twenty-five patches of setting bed which would have taken three to four weeks to complete at the rate of a patch a day, though it is possible that more than one patch was completed in a day. One key issue here is how many workmen might have been on a scaffold at any one time: the more setters, the more could be done.

Divisions of labour are also apparent at Poreč and at S. Vitale in Ravenna. At both sites it is clear that, in contrast to Winfield's view of Kiti, the mosaicists started together in the centre and moved away from each other. For example, at S. Vitale, the decoration of the west arch matches at the apex but becomes increasingly askew. Andreescu-Treadgold has suggested that at S. Vitale the differences in style, technique and materials indicate either two workshops with an overlap in membership or the same workshop resuming work after a gap.[76] At Poreč, which seems to have had workshop connections with S. Vitale, the amount of restoration makes it too tricky to assign differences to hands.[77] Nevertheless, Terry and Maguire believed that, as with S. Vitale, the mosaicists started in the centre and worked away from each other.[78] At both sites, it appears that the different setters did not have identical materials on the scaffold with them and that they did not set these in quite the same way. Some centuries later, at Torcello, on the west wall, the sequence of laying the mosaics from the middle out can be detected through the ways in which figures relate and cut into each other. In the Deesis in the centre, Christ was set first, then the Virgin and Baptist, their hands cutting into the mandorla, finished around them, then the archangels and cherubs.[79]

The mosaicists moved wider and wider, adjusting the spacing of their figures as they worked. Andreescu-Treadgold also suggests that vertical and horizontal lines can be detected within a mosaic, indicating the workloads and changes in the level of the scaffold. In the floor mosaics of Antioch, the analysis of the glass and the stone used also suggests that different parts of the mosaics, especially the borders and interiors, were laid at different times in the making process, but whether these represent a division of labour between skilled and less skilled artists, or the workload of the day, or prefabrication is unclear.[80] This sort of investigation would be informative for wall mosaics. As Andreescu-Treadgold has said, variations in the quality of execution and the style of a mosaic have less to do with 'artistic style' and much more to do with skills and training within mosaic workshops.[81] At Poreč, there may have been as many workshops as there were stylistic differences but Terry and Maguire prefer to understand the differences as the work of different artists from the same workshop.[82] At SS. Cosmas and Damian in Rome, the arch has been seen as the work of two artists: this may be true but it may equally be the case that it was the work of one workshop with different workers in it, doing slightly different things. We cannot be certain and we should not make assumptions without far closer analyses of the actual mosaics.

Working out how a mosaic was laid is essentially a deductive process. We know what the finished mosaic looks like but what would have had to be made in what sequence to achieve this result? It seems generally the case, as at Kiti, S. Vitale and Poreč, that work started at the top, that figures and motifs were laid first in outline and then filled in, and that backgrounds were laid last. Figures were generally outlined in two or three rows of tesserae, one black outline and then background rows set following the figure rather than the usual horizontal lines of the background. Plausibly, certain cubes were set first to establish guidelines in the construction of faces, for example, an eyebrow line running down the nose to the nostril, the centre line of the mouth, the outline of the eyes.[83] In the case of the apse mosaic of the Mother of God and Child in Hagia Sophia, for example, it seems likely that the apse was covered with a base layer of plaster and then a setting bed was laid in the centre to accommodate the figures and an irregular area of gold ground around them (see Fig. 26). It seems clear that work started at the top, because the edge of the footstool is very close indeed to the window: if work had started at the bottom, this gap might well have been larger.[84] The figures were made first, if only because it would be considerably easier to fit the background around the figures than vice versa. The footstool was next: this is suggested by the overlap at the point where Mary's robe and the edge of the stool meet. It is possible to see that the stones and pearls in the footstool were set from right to left and from bottom to top because the mount of the central diamond-shaped stone is, for lack of room, cut off at the top, as are also the two upper pearls, one on each side of it. The rear right post of the throne came so close to the edge of the setting bed plaster patch that its corner had to be rounded off. A trim of gold tesserae, two to four rows wide, was then made round the entire composition, after which the mosaicist proceeded to cover the remainder of the central setting bed with gold. He knew that the gold cubes had to be set on concentric curves, but he did not mark out exact setting lines. Consequently, he occasionally misjudged the direction of the lines and had to correct himself by inserting wedge-shaped patches of gold mosaic which can be seen in close-up. Then the rest of the apse conch was covered with two layers of plaster. To lay the remainder of the gold background, the artist took a centre point immediately above the Virgin's head and,



Figure 29 The Mother of God in the apse mosaic of Hagia Sophia, Istanbul, ninth century. Apart from the modelling of the face, the way in which the gold has been laid concentrically from the crown of the apse is very apparent.

probably using a long cord attached to a pin, marked out a number of concentric semicircles (Fig. 29). A small area of loss to the south of the composition and more or less level with the Child's head reveals that these guidelines were indicated in red paint upon the second coat of plaster. The overall gold background was laid with the help of these guidelines, but with the inevitable result that the rows of tesserae did not exactly line up with those in the gold ground belonging to the immediate surround of the figure.

Frames were generally the last detail to be added:[85] they often overlap and so have to accommodate details of the scenes they enclose, either deliberately as at Kiti, where Mary's footstool is outside the border, or even accidentally, when figures were too big for the space, as may have been the case at S. Maria in Domnica in Rome, where John the Baptist's left foot pokes into the gold of the edging. A case is often made that flesh details (faces, hands and feet) were finished last. This comes from examples of mosaic where areas, usually these flesh areas, remain painted but not mosaicked – supposedly 'unfinished'. But, as I touched on earlier, there were a number of reasons for using paint instead of or as well as mosaic, none of which suggests that the image was unfinished. In the case of the Alexander mosaic in Hagia Sophia discussed earlier, this perhaps reflects a detail in a poorly lit or obscure part of the church that did not need the same attention as a more visible image. In the Pammakaristos parekklesion (the Fethiye Camii), where the figure of John the Baptist has areas of hair and skin – notably his feet (Fig. 30) – designed through a deliberate and conscious mix of paint and mosaic, this may have been an artistic decision for reasons of speed or economy or even because the mosaicist was setting these elements on the scaffold and this was the easiest way to get the required result.[86] It is worth noting that in almost all cases where paint is used with mosaic, it is impossible for the naked eye standing in the church below to detect this. Since figures were typically set first, there seems no reason why they should have been left as 'unfinished'. Rather, what we may have are details that it was better – for a variety of reasons – to render in paint than mosaic.

An alternative method for making mosaics may also have been employed. In the 1950s, it



Figure 30 The lower part of John the Baptist in the south lunette of the bema in the parekklesion of the Pammakaristos Church (Fethiye Camii), Istanbul, fourteenth century. His feet are not fully mosaicked but are a mixture of tesserae and paint.

was widely accepted that mosaics were made in a studio and transferred to the wall, using a reverse technique popular in contemporary mosaic-making. The tesserae are temporarily fixed right side down onto a removable backing which holds the design together. This is then transferred to the wall and pressed into the plaster. It is a very similar method to the way in which *emblemata*, the fine central details, were made separately for Roman floor mosaics and inserted into the design. However, increased conservation and restoration work on actual wall mosaics led to a preference for a model in which the artist worked on site, making the mosaic straight onto the wall, with all the nuances and lumps and bumps that working with setting beds and masonry involved.[87] These irregularities allowed the mosaic, when set well, to demonstrate its possibilities as an endlessly flexible medium, reflecting light and dazzling the observer.

In spite of this, some contemporary practitioners of mosaic are unconvinced by the idea that mosaics, particularly the finer details of faces and other flesh areas, could be made on the wall.[88] It would be considerably easier and quicker to make these details, even whole figures, in the workshop and transfer them to the wall. One of the objections to this reverse technique has been that the joins where the mosaic was inserted would be obvious; another is that this method would flatten out the tesserae, reducing the uneven and angled insertion of the medium. In fact, neither objection is valid. The modern mosaics at Westminster Cathedral have been put in place through a mixture of direct and indirect application and it is impossible to see the join. Tessa Hunkin, who has considerable experience of this both at Westminster and elsewhere, is convinced that a good mosaicist is able to do it as a matter of course, leaving no trace of any intervention.[89] The way in which figures tend to be laid in medieval mosaics, with a border isolating their shape in the background, would make this insertion easier. I have seen pieces of mosaic in Hunkin's workshop done in the reverse technique before insertion and they are uneven, as lumpy and bumpy as anything on the wall. Further, with a bit of care, and accurate guidelines (rather than underdrawing) on the wall, sections can be fitted together on a curved surface.

I suspect that, as with Westminster Cathedral, both techniques could be used in



Figure 31 Christ from the Deesis panel in the south gallery of Hagia Sophia, Istanbul, thirteenth century, showing the painterly detail also apparent in the head of Mary (Fig. 33 below), achieved through the use of very small, delicately graduated tesserae.

the same medieval mosaic. Backgrounds, for example, might well be set straight onto the wall; parts of figures could perhaps be set on the wall, but equally in the workshop; faces and fine detail may well have been produced in the workshop. A fragment of wall mosaic from Nea Anchialos in northern Greece uses very small tessera, almost like an *emblema*: the size of these tesserae and the fineness of the detail suggest that a workshop would have been an easier place to work than a scaffold.[90] In Hagia Sophia in Constantinople, it is conceivable that Mary and her Child were outlined and perhaps largely set on the wall but that their faces and hands were inserted. The amazingly fine, painterly detail of the faces in the fourteenth-century Deesis panel in the same church (Figs. 31 and 33), with their very small tesserae – many no bigger than 2 × 3 mm – could perhaps have been achieved from the scaffold, but would have been a slow process; less complicated and quicker by far in the workshop, where the colours would be to hand, the surface horizontal, the working conditions less tricky than perched on a scaffold (ask Michelangelo), and it would be easier to correct any mistakes. But the mosaicists would still have been active on site, adapting the bigger details to the actual circumstances of the architectural setting, and taking pragmatic decisions when needed, over the angling of tesserae or the touching up of details with paint, for example.[91]

A note on the heads in the panel depicting Christ, the Emperor Constantine IX Monomachos and the Empress Zoe in Hagia Sophia (Fig. 32) is now needed, since it is clear that all three heads in the mosaic have been replaced, apparently clumsily. If we accept Hunkin's assertion that there is nothing inherently difficult in replacing a section of mosaic and that a good mosaicist should be



Figure 32 Zoe from the panel depicting the Empress Zoe and Emperor Constantine IX Monomachos in the south gallery, Hagia Sophia, Istanbul, eleventh century. The patching around the empress' head is very apparent; it would have been less so covered in paint but could have been set to be invisible.

able to hide this sort of thing, then either the mosaicist of the panel was rubbish, which is unlikely considering both the mosaic work itself and the nature of the piece as an imperial commission, or the evidence of replacement did not need to be concealed, or it was rather better-concealed with paint. Although a host of reasons may exist for this lack of concealment (for example, the Byzantines did not care; the imperial patrons wanted to make a political point), a solution demands a close examination of the panel itself in this technical context.

SKILLS AND TECHNIQUES

Setting a mosaic is a skilled and tricky art. Mosaic works to a double perspective. From close-up, the details of mosaics look unclear, garish, jarring and unfinished, a mass of blobs of colour. The blue tesserae on the chin of the Mother of God in the Deesis panel from Hagia Sophia create an unfortunate appearance of five-o'clock shadow; her face in the panel found at the Kalenderhane Camii has odd blobs of red marooned in an island of white, and the crudely set, widely spaced tesserae create an unappealing image. Similarly, the Kiti angels have odd blocks of grey and gold on their faces. But at a distance, the greys, golds, yellows and blues become shading and modelling; the red is miraculously transformed into a mouth, the gaps vanish. This is illustrated in Figs. 33 and 34 (Mary in the Deesis panel), 35 and 36 (Kalenderhane Camii) and 37 and 38 (Kiti angels). So, in laying the tesserae, the mosaicists needed to be aware that what they did was designed, by and large, not for close-up viewing, but for a grand large-scale visual effect.

It is apparent that mosaicists were well aware that the further back the viewer was from an image, the more the colours of the image blurred together and, at worst, could appear grey and smudgily indistinct. This last is often the case with post-medieval mosaics when the artist has tried to use the medium as if it were paint and so to create fine details through the careful grading and transition of colours. Actually, contrasting bold and clear lines and outlines, around figures and even for details of figures, are more effective ways of making mosaics visible and of bringing out details from a distance. There are at least three key areas in the setting of tesserae that create dynamism and animation within the image – colour and shading; line; and angle – and they are almost impossible to separate.[92] The same technical devices appear time and



Figure 33 Detail of the head of Mary from the Deesis panel, Hagia Sophia, Istanbul, thirteenth century, revealing both the fineness of the tesserae and the heavy blue colouring around her jawline.



Figure 34 The Deesis panel, Hagia Sophia, Istanbul, thirteenth century, as a whole, showing how the colours blend into shading.

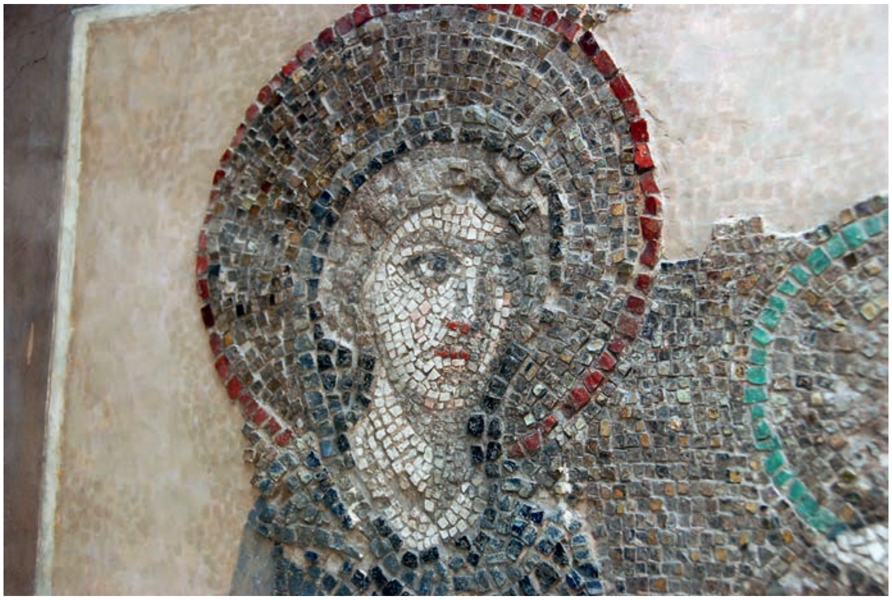


Figure 35 Detail from the detached panel of the Presentation from the Kalenderhane Camii, Istanbul, sixth century, now in the Istanbul Archaeological Museum. Two red tesserae mark out the base of the nose and three red tesserae form the mouth.



Figure 36 Detached panel of the Presentation from the Kalenderhane Camii, Istanbul, sixth century. The crude details of the head blend optically from a distance to become a comprehensible face.

again in mosaics throughout the whole medieval period and medieval world, used in different ways and to different extents. Chequerboarding, for example, the juxtaposition of dark and light cubes which can create shading, softness and brightness, can be seen in seventh-century, eleventh-century and fourteenth-century mosaics; tilting – angling tesserae to reflect and refract light – is used in mosaics from the fifth to the fourteenth century (Figs. 37 and 38).[93]

These techniques perhaps formed a part of the staple basic skill of the mosaicist, whilst other devices may have been more individual. Every mosaic displays a range of cleverly constructed little details as well as large-scale manipulations of the material. It would be impossible to pull out all of these but one of my favourite details is in the Kiti mosaic. Each archangel holds what is clearly a translucent blue glass orb in his hand (Figs. 39 and 40). How does the viewer know that the object is translucent and an orb? Because the middle finger, ring finger and little finger are shown at the back of Michael's orb, the thumb in Gabriel's, modelled in blues and reds, the lines running in the same direction as the tesserae around them and easily overlooked in close-up, but giving the impression of fingers or thumb seen through glass from a distance: a little detail, but one full of skill and expertise.

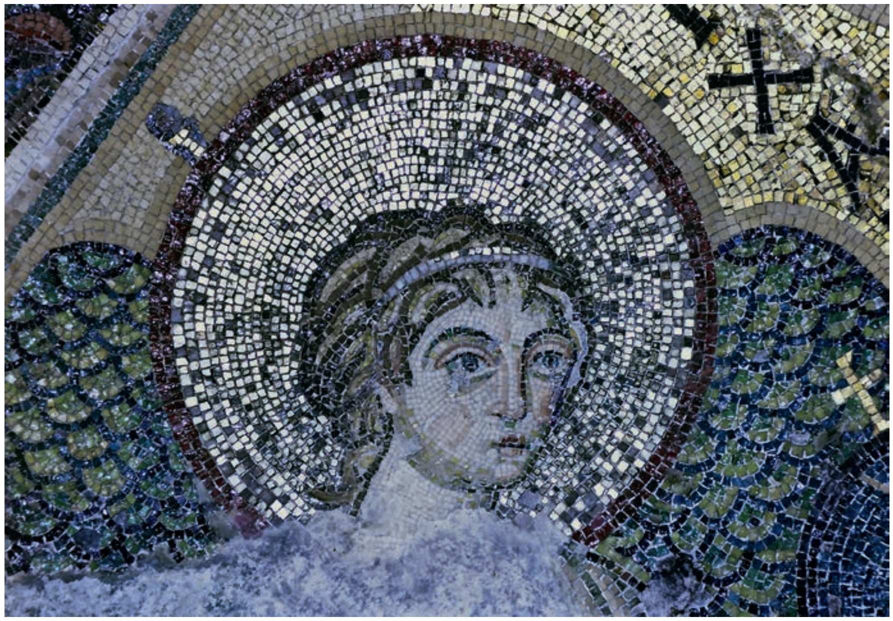


Figure 37 The head of the Archangel Michael, apse mosaic, Church of the Panagia Angeloktistos, Kiti, Cyprus, conventionally dated to the sixth century, chequerboarded in gold, yellow and grey.



Figure 38 The head of the Archangel Gabriel, apse mosaic, Church of the Panagia Angeloktistos, Kiti, Cyprus, conventionally dated to the sixth century, with chequerboarding around the jawline in grey and blue.

Colour and Shading

A mosaicist created an image by juxtaposing a series of blocks of pure colour next to each other. This is a way of creating an image very different from painting. With oil paint, an artist can mix colours and grade them very finely, obtaining exactly the shade desired. But medieval tesserae varied in colour, opacity and hence tone, since the highly sophisticated glass technology required to create the same carefully colour-graded tesserae did not exist. However, the



Figure 39 Michael's orb, apse, Church of the Panagia Angeloktistos, Kiti, Cyprus, conventionally dated to the sixth century.
The archangel's fingers are just visible behind the globe, and the chequerboarding on his forearm serves to create a sense of depth and shading from a distance. The tesserae are carefully laid around his forefinger, overlapping with the outlining of the globe.



Figure 40 Gabriel's orb, apse, Church of the Panagia Angeloktistos, Kiti, Cyprus, conventionally dated to the sixth century. The thumb is visible in shades of blue behind the orb, the fingers foreshortened and outlined in white.

juxtaposition of blocks of hue, even if the colours within each block were not identical and especially when the colours of each block contrasted with each other, was a much more effective way of making an image visible from the floor of the church. At Kiti, Mary's robe is a wonderful chequerboard of reds and shades of blue (Fig. 41) but is seen from the church as solidly red. In Hagia Sophia, her robe is composed through juxtaposing dark and light blues of various shades.[94] Because these blues blur with distance, it looks almost black from within the church, a black against which her golden Child stands out. A mosaic figure often wears a garment modelled in white (often stone) overlain with another bold colour in glass: gold (the archangel in



Figure 41 Detail of Mary's robe, chequerboarded in reds and blues, from the apse, Church of the Panagia Angeloktistos, Kiti, Cyprus, conventionally dated to the sixth century.

the apse of Hagia Sophia); purple (used both in the apse mosaic at Poreč, for example, and in the marching saints of S. Apollinare Nuovo in Ravenna); red (S. Marco in Rome), the change of medium adding to the contrast. Very often the contrast does not jar but serves to make the figures visible. At S. Clemente in Rome, the vine scroll that fills the apse is modelled straightforwardly in strips of colour laid next to each other, pale turquoise blue, lime green and dark green at the simplest level, gold, black and red buds as it gets more complicated.

Vivid patches of hue often occur within scenes or individual elements of scenes and are often deliberately employed to create chains of colour across the mosaic. This can serve to hold the composition together or to highlight specific details within it.[95] At Kiti, the predominant golds and reds of the central Mother of God and the background are picked up in the lower border of the mosaic, contrasting with the border in greens and blues around the image. These blues and greens and also the white and silver tones of the vases in the border pick up in turn on the colours of the archangels. At S. Clemente, the gold background of the mosaic is linked to the other colours by a colour chain moving from yellow through gold and green to blue. A similar modulation of tones can help move the eye from foreground to background, as happens at S. Maria in Trastevere where the ground the figures stand on moves gradually backwards via a shift from green to pale green to yellow to gold.[96] At Poreč, an unusual 'glow effect' is created around some figures by the use of a distinctly different shade of the same colour outlining part of the figure, heightening the form and brightening the colours. In the Visitation, for example, this is visible in the figures of Mary and Elizabeth. Lime green is used against an emerald green background, and turquoise against a cobalt blue background (Fig. 42). It is worth noting that this trick is employed only with glass backgrounds, not stone.

The relative lightness and darkness of colours also served as a tool for the mosaicist. Using light and dark colours next to each other was often used to create a sensation of grey. Laid out in a chequerboard fashion, this was a very common modelling device to create a sense of shading, particularly of flesh areas. It is frequently seen in the faces of figures, for example around the jawline, where the grey creates a sense of the



Figure 42 The Visitation, Eufrasian Basilica, Poreč, with a 'glow' effect created around Mary and Elizabeth through the use of contrasting colours, blue above and yellow below.

three-dimensional head. The heads of both angels at Kiti are chequerboarded round the jawbone and neck, and the range of various colours present in each head (the gold, for example, in Michael's face) reflects a use of the materials to hand to model shading (Figs. 37 and 38). Below the nose of each are two tesserae – green for Michael and blue for Gabriel – which allow the tip of the nose to appear modelled in three dimensions. At Kiti again, a detail of the right hand of the Archangel Michael (see Fig. 39) shows the forefinger of the angel outlined in red glass, a line which runs down the length of the hand and arm (they must have had red tesserae to spare at Kiti). Inside that line, shading is created by a chequerboarding of green and bluish glass and grey stone, and through the juxtaposition of materials, matt and glossy. This colouring looks very odd in the close-up image but simply translates into shading from a distance. This juxtaposing of light and dark is used again and again, across time and place, from the fourth-century head of the woman shown in the vault of S. Costanza in Rome to the twelfth-century head of Mary in S. Maria in Trastevere in the same city, and beyond.

Light and dark colours next to each other also serve to create feelings of depth and volume, and even of modelling, for light colours advance and dark ones recede. This can even evoke a sense of movement. Something similar is apparent in the Transfiguration at St Catherine's Monastery on Mount Sinai (see Fig. 86). Here, the figure of Christ in his white and gold robes contrasts with the dark centre of the mandorla, formed of rings of increasingly bright blue. He almost appears to be located outside the mandorla rather than enclosed by it, bursting out from the pictorial plane (an effect helped by the steepness of the curve of the apse which also serves to throw him forward and out). The bands of blue in the mandorla have been interpreted as a way of showing the theological concept of the divine darkness of the unknowable nature of God, symbolised by the central black block. But before the image is read symbolically, in practical terms a mandorla constructed in this way was the best means of highlighting the transfigured Christ. At Kiti, the Virgin's footstool has silver cubes at the front edge, yellow painted stone cubes on the left-hand side and top back edge, and yellow and brown cubes in alternating rows at the top end. These details help create the sense of the footstool receding in space, just as its positioning across the ornamental border suggests that the Mother of God breaks the pictorial space, putting her into the real space of the church. On the other hand, a dark centre to a gold background draws the eye in, pulling it into the picture: the dark figure of Mary and her stone throne as the foil to the golden Christ-Child in the apse of Hagia Sophia.

Colour contrasting on a small scale was another way to model essential details. The Nea Moni mosaics barely employ chequerboarding as



Figure 43 Adoration of the Magi: detail from the panel formerly in the Oratory of Pope John VII, now in S. Maria Antiqua, Rome, eighth century, showing the sharp oranges used to model details of faces in particular – on the cheeks, ears, noses and mouths of Christ, Mary and the angel, for example.

a technique. Instead, many of the visual effects of the mosaics are created by the use of colours and quite striking juxtapositions of dark and light colours.[97] This is apparent in the modelling of faces, where olives and pinks can be juxtaposed, or in garments, when whitish shades are put side by side with purples, blue tones and olive greens. Dark lines mould the structure of the face and the fill has been manipulated to create a sense of volume around the nose and eyes. In the eighth-century Presentation of the Magi from the Oratory of Pope John VII, a handful of sharp orange glass tesserae were used, for example on the Christ-Child's ear, nose, mouth and chin, defining elements of the face (Fig. 43). At the Zeno Chapel of S. Prassede, the ninth-century mosaics employ the colour similarly as shading and the same orange tone is used to similar effect for the tip of the emperor's nose and his mouth in the narthex mosaic of Hagia Sophia in Istanbul.[98] At S. Marco in Rome, this orange is a significant element of the modelling of faces. Such colour contrasts were also used to set apart individual motifs from the background or from each other. A silver trim, for example, could be used to separate details from a gold background (as happens at Hagia Sophia); a red outline could serve the same purpose. In the sixth-century mosaics of Hagia Sophia, certain colours seem to have been selectively juxtaposed: gold and green are never adjacent but always separated by a line of blue, which sharpens the image and prevents the green blurring away into the gold.[99]

The different tones of the media used were employed to great effect, the difference between shiny glass and matt stone, and metallic glass, and the use of a range of other materials, from terracotta and pottery to mother-of-pearl. Different shades of 'colourless' glass were used to make gold tesserae. These gold tesserae might be set on their sides or even their backs to create effects that were both dark and warm and also light-generating: the Christ-Child's robes in the apse of Hagia Sophia contain such a mixture (Fig. 44), with gold tesserae laid on their sides being used to mark out dark garment folds.[100] Coloured tesserae could be set with the fractured face outwards for a brighter effect. Silver backgrounds were used in some dark vaulted areas, such as in the Rotunda in Thessaloniki and in the sixth-century mosaics in Hagia Sophia in Constantinople. These have tarnished but the



Figure 44 The robe of Christ, juxtaposing gold, silver and reversed tesserae: detail from the apse mosaic of Hagia Sophia, Istanbul, ninth century. The image also shows the changing blues of Mary's robe.

effect of the silver is very different from that of a gold background, being both brighter and lighter.

Even the use of paint could be effective. The contrast that mosaic created with other media, especially paint, could be used to good effect. In the Chora, the church itself is filled with mosaic, but the parekklesion, the adjacent funerary chapel, is painted. It is less likely that this reflected the patron, Theodore Metochites, running out of money – he was superbly wealthy – and more likely that this was a deliberate choice. Theodore himself had designated the parekklesion for his own burial; the scenes in it are all of Judgement and Redemption; it is conceivable that the use of paint throughout created a more sombre effect, reflecting a level of humility as humanity (and the patron) awaited Christ's ruling. In the tomb of Gonsalves Garcia in S. Maria Maggiore, the tomb and effigy of the dead man are in stone, but above Garcia is shown in the presence of the Virgin and Child, in glittering, moving mosaic.[101] In some areas of the Chora mosaics a thin wash of paint was applied over the surface after they had been set, seemingly where the natural contrast with those adjacent was inadequate.[102]

Line

Colour, especially the contrast between light and dark, was also used to articulate the folds of garments and mould the body, creating a sense of volume. Here, colour and line, the directions in which colours were laid, were closely related. Broken lines of alternate coloured cubes were used in modelling the shadow lines of garments and faces. In the case of the Mother of God in the apse of Hagia Sophia, this switch from very dark blue to lighter blue lines creates a sense of a shot-silk chequerboarding in close-up for Mary's robe, but suggests sheen from a distance. At Kiti, red and black are used in Mary's robe to similar effect (see Fig. 41).

Line was also used more boldly. Often the figures in mosaics are outlined in very bold black or red lines, making them clearer and more obvious. This use of dark outlines serves to define the silhouette or shape of the object,



Figure 45 Christ's foot outlined in gold, and Mary's left hand: detail from the apse mosaic of Hagia Sophia, Istanbul, ninth century.

and this could be emphasised still further by using contouring lines of cubes in the colour of the background before the horizontal ones resume. At Kiti, figures are outlined with a double row of stone cubes painted with yellow, following the silhouette of the figure and contrasting with the horizontal background tesserae. The stone further highlights the outline by providing a matt effect in distinction to the shiny glass. Dark lines, and occasionally gold lines, are used as a means of defining garment folds, thus boldly modelling figures. Gold is used to outline Christ's sandal in Hagia Sophia; darker colours delineate Mary's hand (Fig. 45). On a smaller scale, facial features were often defined through red, black or white lines rather than modelled through subtle transitions; cheeks might be bold red patches or lines, noses defined in red or orange.

This variation in the line of the flow of the tesserae could also be used to emphasise significant details. Such changes alter the direction of light, causing it to be picked up and reflected differently. For example, with the modelling of haloes, the gold tesserae are often set running in a circular fashion around the figure's head, rather than in the horizontal lines of the background. This can be seen in many mosaics, Byzantine and Western, and serves to focus and reflect light, as well as differentiating the halo from the general background. It is the case at Kiti, where the use of silver for the angels' haloes adds another layer of differentiation. But it is not a universal feature. In the narthex mosaic at Hagia Sophia (Fig. 46), the lines of gold continue horizontally through the haloes of Christ and emperor alike, and the haloes themselves are marked out by one or two circular lines in a contrasting colour (blue or red). At S. Agnese in Rome, the halo appears to be filled in fairly randomly. In the Deesis panel in Hagia Sophia, the trefoil ripple effect of the gold background continues into the halo of Christ, but the gold of the cross inscribed in it is set in straight, slightly spaced lines; meanwhile, the haloes of the Mother of God and St John the Baptist are set concentrically (see Figs. 34 and 46).

Angle

Related to the change in direction of tesserae are the angle and the depth at which tesserae were inserted by hand. Each tessera acted as a tiny mirror reflecting light; each one reflected that light differently because, inevitably, each was set at a slightly different angle. This may in many cases have simply been the inevitable, though accidental, result of laying tesserae manually.[103] However, it is clear that there were times when tesserae were

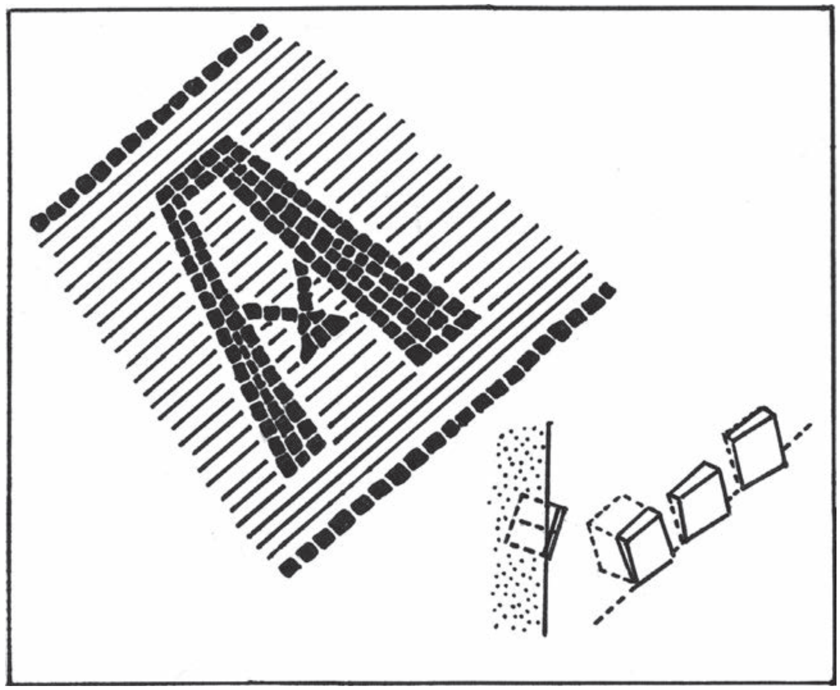


Figure 46 Detail of the narthex mosaic, Hagia Sophia, Istanbul, ninth century, where the gold background continues without a break through the haloes of Christ and the emperor. The gold is also laid with a gap between each line.

specifically set to create particular effects. The narthex mosaic in Hagia Sophia is just one example where the gold tesserae are set both widely spaced and angled down. In this mosaic, each horizontal line is separated by a space seemingly wide enough for another line of tesserae, and in their lines the tesserae barely touch one another. But, for the viewer below the mosaic, the gold looks like a solid background. This certainly economised on the number of gold tesserae needed. In Hagia Eirene, as Figures 47 and 48 demonstrate, the arrangement of the gold tesserae forming the background of the inscription is different from that elsewhere in the mosaic, tilted so that the greatest amount of light is reflected.[104]

In the Great Mosque in Damascus, the gold background tesserae are inclined to 35° in advance of other tesserae; at St Catherine's on Mount Sinai, the angle of inclination is about 45°. The windowsills of the west windows in the inner narthex of Hagia Sophia are tilted in such a way as to catch the direct afternoon sunlight and the tesserae of the windowsills in the apse in the same church are angled to direct light up into the apse mosaic.[105] At the Church of the Nativity in Bethlehem, the tilting of gold and silver tesserae in the robes of the angels in the upper register of decoration picks up and reflects light from the windows opposite (see Figs. 49 and 50). All suggest a conscious

Figure 47 Tilting of tesserae, Hagia Eirene, Istanbul.



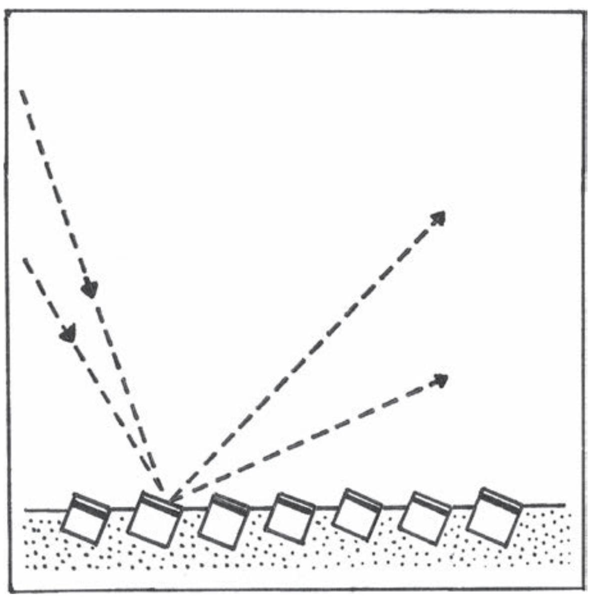


Figure 48 Reflection of light, Hagia Eirene, Istanbul.

awareness of the light sources of the space and a deliberate employment of them. Setting tesserae at different heights is another technical device found in almost every mosaic. At Poreč, in the wreath of Maurus, the leaves are outlined in dark purple. These purple tesserae sit prouder than the smaller and lighter yellows and greens in the centres of the leaves, closer to the setting bed. What this uses, again, is the visual phenomenon that light colours stand out and dark recede; it demonstrated an awareness of how different settings could affect the appearance of the mosaic overall.

Inclining the tesserae, however, was not straightforward because it affected the laying of other bits of the mosaic. If one course of tesserae was angled forwards, then those around them had to be set differently to provide the space for tilting (Fig. 49). But the angling and the individual setting of the gold tesserae played an important part in keeping the mosaic alive. A huge risk in modelling with sheets of pure colour, which is what the gold backgrounds to so many mosaics are, is that these expanses become dead and lifeless. They appear flattened out, solid, static areas where instead they should



Figure 49 A detail of the tilting of tesserae in the silver robes and gold background of one of the mosaics depicting an angel from the north wall of the Church of the Nativity, Bethlehem, twelfth century. This is the angel closest to the transept.

scatter light and cause the mosaic to glitter and almost move. In the apse mosaic of Hagia Sophia, silver tesserae, amber tesserae and reversed gold tesserae all help break up the surface, as does the curve of the apse and the unevenness of the plaster surface. The gold and silver tesserae of the background also have their surfaces angled forward, whilst those of the border are set vertically. In the thirteenth-century Deesis mosaic in the same church, the background gold tesserae are laid in a ripple trefoil pattern which serves to diffuse the light and alters as the light itself changes and moves, creating a shimmering effect (Fig. 50 and also above, Fig. 34). The nature of the architectural features covered also affected the setting of the background. In Hagia Sophia, gold tesserae set in the vaulting of the narthex radiate out in a circular fashion from the centre of the vault.[106] In the fourteenth-century Pammakaristos church, the gold background to the vault in front of the apse mosaic seems to be set from the centre but its regularity was broken up (to good effect in fact) as each of the four vaults was set (Fig. 51).



Figure 50 Gold background of the Deesis panel, Hagia Sophia, Istanbul, fourteenth century, laid as a trefoil pattern, but straightening up in the cross in the halo of Christ on the far right.



Figure 51 The gold vault of the parekklesion of the Pammakaristos Church (Fethiye Camii), Istanbul, fourteenth century, presumably presented a few problems in laying the gold tesserae to spread out across the four vaults in an orderly fashion.

LIGHT AND LIGHTING

One further critical element in the making of mosaics is the way in which light was employed and deployed. Light has two elements: its internal depiction within a scene; and the real external light by which a mosaic was seen. In many ways, light is the unseen but hugely dominant colour in a mosaic. The created light adds to the sense of volume, depth and illusion in the image whilst the real light brings the mosaic to life.[107]

There seem to have been two basic strategies for portraying light within a mosaic. One was to depict the figures in a mosaic in relation to the real light source within the specific building; the other was to ignore the specific lighting of the building and to depict or suggest an internal light within the image that bears no relation to the external light, and need not be consistent to the imagined source of light within the image. Illusionism, as we understand it as produced through the consistent application of light, does not really work in mosaic art. It is possible to find both real and internal light used in the same mosaic, for various parts of the the image can be lit (or shown to be lit) independently or interdependently.

Real light is often imagined as coming from in front and above the picture, but this real light does not always illuminate the picture plane. At Kiti, where the immediate external light actually comes from below the apse, the shading on the left-hand angel, Michael, is modelled as if the external light comes from above and to the left, so his jaw is shaded on the right side. Gabriel, however, is modelled as if the light comes from the right and above, and so his jaw is also shaded on the right-

hand side, as are the faces of the Mother of God and her Child. In contrast, the real light of the window above and to the left of the Deesis panel in Hagia Sophia, Constantinople, is depicted within the mosaic, for a shadow line runs across Christ's neck, from the right-hand side of his jaw, the shadow cast by a real jaw in real light from this direction (see Figs. 31 and 34). But at the Chora Church, where the Deesis panel receives no direct external light, the shading on Christ's neck is concentrated at the right-hand side, rather than drawn across it (see Fig. 24). At St Catherine's, Mount Sinai, where the apse mosaic receives no direct external lighting, there is little definition of shading, as if real light comes directly into the faces of the figures. In the apse mosaic of S. Maria in Trastevere, shading on the Virgin's face, apparently the result of a light source above her and to the viewer's right, means that she appears to turn in towards her Son; his face, however, is unshaded, as if illuminated from in front or above.

The ways in which shadows were depicted is also informative of the construction of internal light in a mosaic. Certain conventions (borrowed from Classical art) are apparent in mosaics such as those in Ravenna and Rome, in which pre-cast shadows fan out as dark contrasting cubes from the feet of figures, the paws of animals or the bases of objects. In the 'Mausoleum' of Galla Placidia in Ravenna, the flickering flames of the gridiron awaiting St Laurence are reflected by leaping tongues of dark blue shadow standing out against the blue background. But each figure tends to have its shadow done individually and these shadows rarely bear much relation to where 'real' cast shadows would fall from the consistent external light source of the mosaic.

The actual lighting within a building has considerable potential to influence the appearance of the mosaic, creating space and colour. Light striking a mosaic acts as a dynamic force, a force which could be carefully and deliberately employed by the mosaicist to create the desired effect. Depending on the light, a mosaic can quite literally change colour. Mary in the apse of Hagia Sophia can move from a sombre dark blue to a brilliant gold depending on what sort of light falls on her. At Poreč, gold tesserae are mixed and blended with yellow and green tesserae, changing the appearance of the mosaics as the spectator moves and as light within the church moves.[108] Each tessera, each cube of glass, catches and reflects light back; each is a tiny mirror, but together they create a sense of brightness, dazzle and movement. To make the most of mosaic's potential as a medium, mosaicists seem to have had a good grip of both optics and geodesy, the art of measuring volume and surface. They were clearly able to work on a careful planning and placing of mosaics, to experiment with devices for the reflection and refraction of light (the window-sills in Hagia Sophia in the apse are a good example of this), and they appreciated that mosaic works best on a non-flat surface. It is affected by the different angles of surfaces, the different degrees of illumination as light changes, the degree of reflectance of surfaces in white light. This blinding, brilliant effect was appreciated by the audiences: Prokopios' description of Hagia Sophia talks of the reflection of the marbles and the gold mosaic in competition.[109] To enhance the reflection and refraction of light, mosaics were placed in carefully constructed squinches and pendentives, in curved apses, in domes. In the pendentive depicting the Annunciation at Daphni, light is collected in the space between the Virgin and the archangel, meaning that they stand either side of a pool of light, perhaps given symbolic meaning as a part of the actual scene. Even on flat surfaces, curved setting beds were employed to allow for the greater play of light; and that gets us back to the chicken-and-egg relationship between the medium and the architecture in which it was located.

LIGHTING AND WINDOWS

Mosaic was further affected by the architecture of a building through the positioning and orientation of its windows and doors. A mosaic could be seen differently at different times of day or of the year.[110] The orientation of a building and the time of day or year influenced how much light entered through the windows. The design of window, the type of window glass, the artificial lighting within a building, all affected the amount of light in the church. It seems plausible that between the sixth and the twelfth centuries, the amount of natural light admitted into Byzantine churches decreased quite significantly.[111] Influential in this was a change in favoured design from a basilica church to a centrally planned domed church. Tall rectangular basilica churches such as S. Maria Maggiore in Rome or St Demetrios in Thessaloniki are essentially big, fairly open spaces, often bright and well lit from the surprisingly large number of windows in the upper registers of the nave walls; the aisles may be dark but the body of the church tends to be bright. In contrast, what might be seen as the typical Byzantine church, a small domed church, often built as a version of a cross-in-square, as at Hosios Loukas, is a smaller, more compact and darker space with fewer windows and more nooks and crannies.[112] In the case of Hosios Loukas, the relationship between light and the form of the building is remarkable (Fig. 52). Although much of the light comes through the windows, the gallery also has spaces that open onto the outside world. These windows are not visible from within



Figure 52 View into the Katholikon, Hosios Loukas, Phokis, eleventh century, giving an impression of windows, lighting and the glimmer of gold tesserae.

the church and so the gallery spaces appear to glow from within.[113] Even the semi-translucent marble panels at the bottom of window openings inside the church are carved out to such an extent that they too admit light.

The windows of early medieval and Byzantine churches were glazed with 'clear' or 'colourless' glass in the Roman sense, which is to say slightly greenish tinted, pale in tone, and more opaque than the glass to which we are accustomed. Green was considered restful to the eye in the Roman and Byzantine worlds. Window panes of translucent and coloured glass were used in some early official Christian buildings: one of the earliest is the Constantinian basilica of Porta Laurentina at Ostia. Whether 'colourless' or coloured, these windows would not have admitted quite as much light as modern window glass. It has been suggested that alabaster was used as a glazing for windows in the 'Mausoleum' of Galla Placidia in Ravenna (fifth century); if true, this would have produced a very interesting light. By the ninth century, crown-blown discs were being used in plaster openwork *transennae* with circular holes, a form that was to become the standard window screening device in Byzantine architecture.[114]

Stained and coloured window glass is very uncommon in Byzantium. There is evidence from a couple of sites, the Pantokrator Monastery and the Chora. Both these sites are twelfth century and the coloured, painted, stained glass from them has caused much academic controversy – is it Byzantine or Western?[115] Coloured glass windows affect the nature of light coming into a building and change the balance between light and dark in a building's interior. They darken a building and would interfere with the visibility of mosaics and wall paintings and indeed would compete with them.[116] It is a plausible hypothesis that the growth of the use of stained glass in the West was one factor undermining the popularity of mosaics in late medieval Italy.

It is striking how many mosaics, apse mosaics in particular, receive little or no direct natural light. St Catherine's, Sinai, is one. Here, there are two windows on the crown of the triumphal arch, which can throw dazzling beams of light into the church, three windows below the apse mosaic, and windows in the nave starting in front of the arch. It is possible that the angling of the tesserae in the triumphal arch was designed to pick up as much light as possible from the windows. The depth of the apse also restricts the light. Fortunately, the church admits a good amount of light and so the mosaic is visible, if not vivid, during the day, but whether the mosaic benefited from artificial light is impossible to tell.

But churches were lit with a range of artificial lights, candles, oil lamps and candelabras, though it is rare that we have any sense of what and how many devices were employed. One exception is the Pantokrator Monastery in Constantinople (the Zeyrek Camii), whose *typikon* (foundation document) makes it clear that a great many artificial lights were used in the church to light up different parts at different times. However, because the Pantokrator has lost its mosaics, the effect of this on the decoration of the church is impossible to reconstruct. But all forms of artificial light would have provided a flickering, moving light, which would have had the potential to interact with the myriad of mirrors making up the mosaic decoration.[117]

The lighting of a building, both natural and artificial, has a significant influence on the colour balance of the picture, with the potential to alter it in such a way as to disturb the overall compositional balance. In purely physical terms, the decrease in illumination on a complete colour scale results in a shift of emphasis, or relative intensity, from the red end of the scale to the blue. In dark surrounds, blue is the last colour to shine out, but is very intense. At St Catherine's, this causes the white Christ in his blue mandorla to be even more apparent. In well-lit surrounds,

red and yellow are stimulated, and this can affect the perception of gold mosaic backgrounds. Complementary colours, red and green, blue and yellow, play off each other; colours are affected by the proximity of other colours. At Nea Moni, realising the narrow dark space of the narthex, the mosaicists compensated for the lack of external light in their choice of materials, choosing light shades. Specific colours of tesserae could be used to particular effect. The use of silver tesserae in place of gold created a different light effect; it might be used, as at both the Rotunda in Thessaloniki and Hagia Sophia in Istanbul, as the background in darkened vaults. I mentioned earlier the use of a particular very sharp shade of orange glass in some surviving mosaics in Rome (the fifth-century panels in S. Maria Maggiore or the eighth-century panel from the Oratory of Pope John VII now in S. Maria in Cosmedin), used to highlight details such as cheekbones, lips and the point of the chin. In the ninth-century Zeno Chapel of S. Prassede, the angels supporting Christ in the vault have these orange highlights as well as orange lines around their arms and across the palms of their hands (see Fig. 56). These surely served to bring out these details in spaces where, through lack of light or great distance, definition might otherwise have been lacking. Different media might also be used differently, creating variation. Three domes from the Chora, two in the narthex and one in the parekklesion, demonstrate how the medium used also affected the lighting and the appearance of the image. In the narthex of the church, mosaic is used in the two pumpkin domes which are lit by eight windows in the drum, one for every other section. Light runs up (or down) the flutes to the centre, joining Christ in the middle to his ancestors. These domes provide most of the light for the inner narthex. The parekklesion dome is ribbed and is painted. It is lit by twelve windows, one at the base of each segment, so that the dome appears to stand on a circle of light. In this way, the light-reflectant quality of mosaic is emphasised through the distribution of light, in contrast with the more uniform illumination of the paintings. How far these were deliberate architectural choices about the windows influenced by foreknowledge of the medium to be employed is another matter.

And how far mosaicists were always consciously aware of and/or prepared to do anything about all of this is also another story. As already described, the proportions of the Mother of God in the apse of Hagia Sophia are all wrong and the mosaic seems to have been designed from scaffolding level and the optimal viewing point is directly below, looking straight up at it.[118] In the Rotunda in Thessaloniki, the workmanship and detail of the mosaics is ridiculously good, but the images are 20 metres or more above floor level and so these details – the swan frieze for example that runs around the cornice of the mosaic buildings – are really not visible. In contrast, in the Zeno Chapel in S. Prassede or in the galleries of Hagia Sophia and S. Marco, the viewer can get up close to the bold techniques of the mosaics and so see all the 'defects' in the modelling. At the Chora Church, the massive Deesis panel (see Fig. 24: Christ is 4.2 metres high and the Mother of God 3.67 metres) is located in such a narrow space – the inner narthex – that the viewer is unable to get back far enough to get the full benefit of the shaded chequerboarding of flesh details. To an extent, to the mosaicists, installing a mosaic was just another job.

This has been something of a whistlestop tour through questions about mosaic-making. In telescoping the material, I have perhaps implied that techniques did not change (very much) over time. Actually, we do not know how true this may be. The study of mosaics lacks the full investigations and descriptions of so many individual mosaics and mosaic

programmes (even something as basic as size of the mosaic, never mind the size of the tesserae and relative proportions of glass to other media) that would allow technical modifications of the sort described here to be noticed and traced. What mosaics can tell us from close analysis, not for their style but for their manufacture, remains to be fully explored. But what I hope this chapter has demonstrated is how valuable such studies would be. Within a mosaic, changes in techniques and materials are certainly as significant as and probably more significant than perceived changes in styles.[119] Architecture, materials and light come together to create the image, presenting the makers with a range of choices, both deliberate and unconscious, the latter born from experience.

Chapter 3

THE BUSINESS OF MOSAICS

The previous chapter ended with the mosaic on the walls. But one thing it did not discuss was who took the decisions and made the choices about what was put on the wall, who was responsible for the organisation of the logistics required, and what it might all have cost. Making mosaics was a business, and that is what this chapter will explore.

ARTISTS: NAMES AND JOB DESCRIPTIONS

Knowledge of actual wall mosaic artists is limited, as it is for most craftsmen and artisans in Late Antiquity and the medieval period. The most obvious sources of information, artists' signatures, are found exclusively (until the twelfth century) on floor, not wall, mosaics: about eighty of these survive from between the fourth century BC and the seventh century AD, whilst none survives on a wall [1] The earliest explicit written references to artists of wall mosaics come from two gravestones of the first century AD, one that of a slave and son of a slave who fell from a height to his death (presumably whilst making a mosaic), the other that of an imperial freedman of the Emperor Tiberius.[2] Other funerary inscriptions are not so specific, simply speaking of 'the mosaicist', and we are left to guess whether wall, floor or both. In his *Natural History*, Pliny listed famous painters and sculptors, but did not include mosaicists, which may reflect a lower standing for this form of art. However, he is the only Classical author to provide the name of a named mosaic artist: Sosos. However, Sosos was famous for his floor mosaics, in particular the image of an unswept floor, a mosaic that Pliny called the most famous example in the genre, admiring its extreme realism.[3]

Named artists in any media from the Middle Ages are in very short supply. Most works of art are unsigned, and where artists' names do exist little else is known about the individual. Ninety-eight artists spanning the thousand or so years from fourth- to fifteenth-century Byzantium are listed by the *Oxford Dictionary of Byzantium*; for most, we know only of their existence, and indeed several are fictitious.[4] Named wall mosaicists from the wider medieval world are even fewer and further between. A colophon in a ninth-century Greek psalter records 'Thomas, a monk and painter from Damascus' who 'created this splendid work of glass' at the Church of the Holy Sepulchre in Jerusalem.[5] This may, or may not, be a reference to mosaic (the 'splendid work of glass') and Thomas may, or may not, have been a ninth-century monk-artist, depending on the interpretation of the palaeography of the text. As Chapter 8 will discuss, there is no reason that a monk from Damascus could not have been a mosaicist, since it is plausible that there was an on-going mosaic-making industry in the Levant for much of the period covered by this book, but it is not certain. It is not until the twelfth century that a couple of names of wall mosaicists emerge with some certainty. Ephraim, identified as 'ἱστοριογράφου Κ(αὶ) μουσιάτορος', 'painter' (*historiographos*) and 'mosaicist' (*mousiatoros*), appears in a dedicatory inscription of 1169 on the wall of the Church of the Nativity in Bethlehem. Elsewhere in the same church, one Basil is mentioned in an inscription to either side of the legs and feet of an angel, in Latin, *Basilius Pictor* and in Syriac, 'Basil the deacon depicted (this)' (Fig. 53). Yet another text recorded in the seventeenth century in the same church may have mentioned another artist. The inscription was part of a prayer in Greek: 'Remember, Lord, your servant Zan . . .' If this was a twelfth-century inscription and if 'Zan' was correctly transcribed, it might perhaps refer to a mosaic artist named John in the Venetian dialect of Italian.[6] So Ephraim, Basil, and just possibly Zan, were the artists responsible for the Bethlehem mosaics. In the Islamic world, named artists are equally absent. A now-lost inscription from the Dome of the Rock in Jerusalem possibly identified an eleventh-century Egyptian mosaicist. It was recorded by a twelfth- to thirteenth-century author, al-Harawi, as identifying ''Abdallāh ibn Hasan al-Misri the Egyptian' as the 'al-muzawwiq' of the work, which has led to suggestions that there was an Egyptian school of mosaicists in the Fatimid world.[7] But *al-muzawwiq* is a tricky term and may well mean something closer to a more general 'decorator' (or even perhaps 'designer') than the very precise 'mosaicist'.[8] Given that the inscription commemorates the reconstruction and gilding of the dome, 'Abdallāh was clearly involved in some way, though we cannot be certain that he was the 'actual' mosaicist. One of the difficulties here is that our own term 'mosaicist' is also a loose one, used both of the designer of a mosaic and of the individual who inserted the tesserae and, as I will go on to discuss in a moment, with no guarantee as to whether the two were one and the same, or not.

Mosaicists' names really start to appear in art from the late thirteenth century onwards, particularly in Italy. Between 1270 and 1529, 104 named individual mosaicists have been documented there.[9] The best known include artists such as Jacopo Torriti, Filippo Rusuti and Pietro Cavallini, who all signed major mosaics in Rome. Other less well-known figures include Gaddo Gaddi, Vanni da Firenze and the unfortunate pair of Bingo and Pazzo, caught stealing materials in fourteenth-century Florence.[10] In Venice, Nicholas Philanthropinos (*c.* 1375 until post-1435) was an active icon-painter on Crete and then resident in Venice and active at S. Marco.[11] He is described as 'magister Nicolaus Philastropino, magister arts musaice in ecclesia Sanct Marci', 'master in the arts of mosaic in the



Figure 53 The 'signature' of Basil in Latin and Syriac is visible either side of the angel at the furthest left on the north wall of the nave in the Church of the Nativity, Bethlehem, twelfth century. The gold robes of the middle angel glisten effectively. The picture also shows the Council of Antioch below, framed by plant scrolling.

church of S. Marco'. Other known Venetian mosaicists include Jacobello della Chiesa, who worked on mosaics in S. Marco until his death in winter 1423/24 and Michele Giambono, who was also a painter, working on the Cappella della Madonna dei Mascoli from *c.* 1433.[12] At Orvieto, registers and account books from the cathedral provide detailed evidence for the processes involved in making the mosaics of the façade between 1321 and 1390, including the names of several glass masters, mosaic masters and overseers.[13] Amongst these were Orcagna (Andrea di Cione di Arcangelo) in 1359, Fr. Giovanni di Buccio Leonardelli (active in the 1350s and 1360s) and Nellus Jacomini in 1365. At least four Franciscan mosaicists have been identified: Torriti was almost certainly a Franciscan, as was one Iacopo, a mosaicist highly esteemed in Florence, and later Leonardelli from Orvieto was also one.[14] The number of Franciscans associated with mosaic-making has led to a suggestion that it was a particularly Franciscan art form, perhaps because they were cheaper and more reliable craftsmen.[15] Later in the fourteenth and fifteenth centuries, more named artists are linked to mosaic-making, including some not immediately associated with the medium: Cimabue, Giotto, Ghirlandaio. The increasing identification of mosaic artists fits well with the appearance of names in other artistic media in the region.

Such names, however, highlight the issues about the division of labour and what was meant when an artist was described as a mosaicist: was he both designer and setter? The evidence from Orvieto indicates that 'the mosaicist' could be both, but there is some debate about whether Torriti, for example, executed the mosaics of S. Maria Maggiore or whether they were the work of his team of artists, or what Giotto's part in the mosaic of the *Navicella* in Rome was, whether he was the designer or whether he actually engaged in setting the tesserae as well (I will pick up on this in Chapter 13). By the sixteenth century, however, Raphael simply drew up the plans for the mosaics of the Chigi Chapel in S. Maria del Popolo in Rome: the Venetian artist Luigi da Pace set the tesserae. This division of labour is something which is very much the case in the installation of mosaics now: at Westminster Cathedral, for example, Tessa Hunkin has often been called upon to set the designs of other artists (usually not mosaicists and without the experience of designing and setting mosaics).

The paucity of named mosaicists in the Middle Ages is less about medieval attitudes to mosaics as such and more about medieval attitudes to art and artists. Medieval society did not view artists in the same terms as we do: the qualities of individualism, self-determination, imagination and innovation that are perceived as a definition of artistic practice today may have played a role in the production of art, but they were not aspects that were remarked upon or praised then. Rather artists were, almost as a matter of course, anonymous. Names on works of art consistently refer to patrons, to those who commissioned and paid for the mosaics, from the Constantinian mosaics of the fourth-century churches in Rome to the range of papal mosaics in the same city, from the imperial mosaics of Constantinople to the regal ones of Norman Sicily. Patrons were the people who mattered and they are likely to have had some sort of role in the design of *their* mosaic. The ways in which the ninth-century mosaic at Germigny-des-Prés in France with its strikingly original depiction of the Ark of the Covenant reflects the theological views of its bishop, Theodulf, make it probable he played a major role in its layout. The apse of S. Maria Maggiore in Rome may have been the work of Torriti but the presence of Sts Francis and Anthony in the mosaic make it all but certain that its plan came from the Franciscan pope, Nicholas IV. Much of the reason for artistic anonymity was that there was an ambivalent attitude towards manual labour – and making art was a form of manual labour – in both Byzantium and the West. Such toil was less well regarded than practising the liberal arts or serving God. In his *De diversis artibus*, Theophilus went so far as to say that manual dexterity alone did not produce art. Rather, the gift of the Holy Spirit was needed to produce images of Christ and the saints, a mix of skill and divine wisdom.[16] In Byzantium, the Acts of the Seventh Ecumenical Council of 787 decreed that 'the making of icons is not the invention of painters but [expresses] the approved legislation of the Catholic Church' and went on to say that the conception and tradition of religious imagery belonged to the Fathers of the Church and not to painters.[17] God was the ultimate artist, having created man in his own image and so inspiration came from God. The artist was of less moment. He was but a paid servant of the patron.

We do not know very much about how makers of mosaic were identified or how they identified themselves; even the words for mosaic itself are not always as clear as we would like. Part of the problem is that the terminology used of mosaics in Latin and Greek makes it hard to distinguish between wall and floor mosaicists. In signatures of floor mosaicists, *tessellavit*, ἐψηφωσε and ἐκεντησε are all used as verbs for 'making (floor) mosaics'. The third/fourth-century *Price Edict* of the Emperor Diocletian, which

attempted to fix maximum prices for certain commodities and for the wages of certain craftsmen in a bid to check inflation, refers both to the *musearius* who was paid more and to the *tessellarius*, paid less, but both words seem to mean 'mosaicist'. Whether the distinction was that one referred to wall mosaicists (*musearius*/μουσιάριος and also κέντησις for mosaic) and floor mosaicists (*tessellarius*/ψηφοθέτης), or whether it was between fine decorative and plain tessellated pavements, or between the designer and the layer of the mosaic, we simply do not know.[18] The *Price Edict* also records rates of pay for the wall painter (*pictor paretarius*) and the *pictor imaginarius*, which translates literally as *painter of images*; again we have no idea of the distinction between these or of their possible relationships to mosaicists. Other terms for mosaicist include that used in a sixth-century story of a man who had to replace an old mosaic (τὸ παλαιόν μούσιον) of Aphrodite on a wall. This says that he 'was skilful at the craft of mosaicist' (τὴν τοῦ μουσάρου τέχνην ἐπιστάμενος). On the sixth-century mosaics at Mar Gabriel in Kartmin, an inscription on the base of the south tympanum reads 'The mosaic work was done', the rest being lost. The word μουσομα is used, which is otherwise unknown but its similarities to μουσεῖον means that it presumably refers to the wall mosaics.[19] There are very, very few dedicatory inscriptions on wall mosaics and they tend not to help with terminology: at St Catherine's on Mount Sinai, for example, the word 'work' (ἔργον) is used. The distinction between μουσεῖον and ψήφωσις is also unclear. The former tends to refer to wall mosaics and the latter to floor mosaics, but we cannot be sure that this was always the case. We find μουσεῖον used on a fifth-century floor mosaic from Thebes and it is uncertain whether the stonemason (λιθοξόος) blinded putting lead into the columns whilst setting the marbles and mosaics (τῶν μαρμάρων και τῶν ψηφίδων) at the church of St Photeine in Constantinople was working on the walls or the floor.[20] Even with Ephraim, the *historiographos* ('designer'/'painter') and *mousiatoros* ('mosaicist') from Bethlehem, we cannot tell exactly what these two terms might have meant. *Historiographos* certainly has implications of 'designer' and Ephraim's presence in the main dedicatory inscription and his description as *historiographos* and *mousiatoros* may indicate that he was the leader of the team. In the case of the other artist from Bethlehem, Basil, he is called *pictor*. In the eighth-century Latin text cited in the previous chapter, both *pictor* and *artifex* are used, possibly a distinction between 'painter' and 'craftsman', and in thirteenth-century Rome both Torriti and Cavallini refer to themselves as *pictor*, that general term meaning 'artist' or 'painter', perhaps the Latin equivalent of *al-muzawwiq*. Whether *pictor* was ever used in a more definitive way, perhaps for the underpainter rather than the layer of tesserae, or whether it was employed more broadly like *historiographos* to suggest a 'maker of images' is impossible to tell.

It would not be unreasonable to assume that floor mosaicists and wall mosaicists could have been the same people. Floor and wall mosaics share similarities (as well as differences) in the techniques, skills and materials needed, and it may be that the lack of distinction made in the literature was because there was no distinction to make.[21] It is also possible that wall painters may also have worked as mosaicists and vice versa: the use of underpainting in wall mosaics makes this a distinct possibility.[22] It certainly seems the case in the Late Antique and medieval worlds that artists could and did turn their hands to a multitude of tasks across craft-lines. In sixth-century Byzantium, architectural sculptors were also expected to work in incrustations and *opus sectile* (the cutting and inlaying of marbles, stones and glass into walls and floors).[23] Similarly, in thirteenth- and fourteenth-century Italy, Torriti, Cavallini, Giotto and Cimabue all worked in

paint and mosaic. At Orvieto, the master mosaicist Orcagna's contract specified that he should also sculpt, paint and polish figures of marble. The boundaries within work practices changed further as apprentices rose to become masters themselves. So a mosaic workshop was not a static entity: the balance and distribution of the skills and nature of contributors may have varied across commissions. Perhaps there was never enough mosaic made at any one time to keep artists or workshops going unless they diversified; certainly, the more versatile the artist, the more likely he was to remain employed.

WORKSHOPS AND ORGANISATION – WHAT DO WE KNOW?[24]

Individual artists are unlikely ever to have been the whole picture as far as mosaic-making was concerned. Rather, it was a medium that demanded a lot of organisation and co-ordination, perhaps what might be called 'team-working', and one which almost certainly needed to be carried out by groups of people – workshops rather than individuals. This term 'workshop' is an ambivalent one. It can relate to the physical place or building where or in which work took place; it is also often used to denote a group of people working together as a team, perhaps under a 'master', perhaps with a system of workmen, apprentices and the like.[25] The word is also used by art historians to pull together a body of work identified as being from the same artist or related artists through its stylistic similarities. Throughout this book, I shall be using it to refer to the possible group of people who made up a team.

In terms of floor mosaics, interpretations of the signatures and of the associated styles have led to the conclusion that mosaicists worked as a team. This is supported by inscriptions on funerary monuments and legal documents, which also suggest that mosaicists worked in family workshops, and the craft was passed on from one family member to another.[26] This is a perfectly logical model: it may well have been one that was used more widely in the arts and crafts, including wall mosaics. Such workshops could have been as small as a single master-craftsman with an apprentice (perhaps a family member) and an assistant or a slave for less skilled work; on a grander scale, they could have involved a contractor and a number of subordinates, slave or free. Reinforcing the family connection, an edict of Constantine I, repeated in the law codes of Theodosios and Justinian, specifically included glassmakers and mosaicists (both *musivarii* and *tessellarii*, but whether floor, wall or both is unclear) in a long list of craftsmen exempted from public service so that they could practise their trade and train their sons.[27] It is possible that, like other artisans in the Late Roman period, mosaicists belonged to *collegia* or guilds.[28] Later, in Byzantium, we have no idea: the evidence for guilds in Byzantium in any case is limited, tendentious and ultimately inconclusive.[29] Although the fourteenth-century material from Orvieto indicates that there the glassmakers at least belonged to a guild, evidence of guilds earlier in the West is complex and the place of glassmakers unclear.

I have already covered something of the logistical organisation required for mosaic-making in discussing the making of tesserae from raw glass to coloured cube. I have also touched on the range of people and skills needed for the design, construction, decoration and furnishing of a mosaic (and indeed beyond that, of a building). In this context of workshops and project organisation, I want here to explore something of these issues in a little more detail, using in particular the documents that survive about the façade mosaic made for Orvieto Cathedral in Italy between *c.* 1360 and 1390.[30] The Orvieto

material cannot tell us how mosaics were made at any other time than the fourteenth century, and, even then, different artists or groups will almost certainly have been organised differently, but it is suggestive about how the making might have been organised, and it at least gives clues as to what areas of work needed to be covered.[31] It also underlines the fundamental point that time follows numbers: how long a building and its decoration took was a reflection of how many people were involved with it. The Orvieto mosaics seem to have taken about twenty years to complete and the documents do not explain why it took this length of time.

The evidence from Orvieto is a reminder that making a mosaic began with the planning, the interaction between patron, builders and the mosaic team. Even to start the mosaic required the organisation of the materials needed for making the mosaic: glass and/or glass tesserae, gold and silver tesserae, stone/other materials and/or tesserae made from these materials, as well as plaster, metal tools and clamps for the plaster, perhaps fuel, paint, scaffold, bowls (to hold the tesserae), perhaps paper and parchment if sketches had to be made. Someone would be needed to cut and sort the tesserae, to make and apply the different layers of plaster, to paint the plaster. At Orvieto, the workmen carrying out these tasks formed part of the team assembled to work on the mosaic. They were responsible for making tesserae from glass, stone and other substances and sorting tesserae for use. The overall team must also have had members familiar with the making and applying of plaster, both the coarse underlayers and the setting bed, since this appears to have been part of their remit.

The Orvieto documents make it clear that the construction of the cathedral was, as in many medieval Italian towns, undertaken as a public building programme controlled by a committee of a treasurer and four supervisors, known as the *Opera del Duomo*, elected by the *Commune*, the city's governing body. They oversaw every aspect of the construction, including the finances, the purchase and production of building materials, the hiring and management of the artists and artisans. We find, for example, that the officials arranged for furnaces to manufacture the glass tesserae and a kiln for plaster-making to be built on site. The *Opera*'s blacksmith made a range of tools for the mosaic workers, both for glass blowing and for cutting tesserae. He was also paid for making trowels for laying mortar and for clamps and nails to reinforce the structure of the mosaic. In fact, the *Opera* also seem to have provided both large-scale equipment – the scaffold – and small-scale – the bowls for holding tesserae. This also indicates that providing the basic equipment might well fall to the patrons rather than the workmen.

The day to day direction of building, however, was the work of the *capomaestro*, appointed by the *Opera* and responsible to them. At Orvieto, he was both the architect and designer of the façade and responsible for co-ordinating the different groups of workmen needed to construct the building.[32] Teams of three to six workers were engaged on the mosaics; their different tasks included cutting tesserae, laying setting beds, painting the underdrawing, setting the tesserae. It seems that almost any member of the team could undertake all and any of these tasks, and the Orvieto documents indicate that a programme of training apprentices in all the techniques related to making mosaics, from glass-making to finished product, existed. However, the workforce was hierarchically organised and everyone answered to the master mosaicist, though whether each master had one team or whether the mosaic master served as *capomaestro* and oversaw several teams is not clear. The master mosaicist was expected to be expert in all phases of making mosaic from glass cutting to setting tesserae.[33] One of these masters, Father Leonardelli, is described in these documents as

'painter, master of glass and master of the mosaic work'.[34] He can be traced in the contracts carrying out most of the tasks associated with the production of mosaics, from the cutting of tesserae and applying of plaster to the setting bed to the underdrawing and setting of tesserae. His contract of 1362 makes it clear that he both painted the design and had two assistants helping with the setting. A later mosaicist at Orvieto, Pietro Pucci, started as an apprentice to a painter, then became a glass cutter, painted figures and finally worked as a mosaicist.

This structure of a workshop with a master at its head is one apparent both in the Late Roman period and at Orvieto: it makes sense to see it as a method of organisation that lasted throughout the Middle Ages (and it probably was a 'master', though female mosaicists are known from the Roman period).[35] The Orvieto material suggests that ultimate responsibility for the building lay with the *Opera* but that the *capomaestro* took charge on site. On this model, such as it is, it seems likely that the mosaicists were told what mosaics were needed and that it was their job to fit them into the spaces using the material available. It also implies that the *capomaestro* was responsible in the first instance for design and may have had special expertise in, for example, fitting the design to the space available. This moves towards the sort of practice apparent later in Renaissance Italy, where a single person seems to have been responsible for design and drawings and the realisation of these, even if not all the actual physical work.

From Orvieto, a sense is also gained of how the tesserae were supplied for the mosaics. In Chapter 1, I outlined two theories about this: the making of coloured glass and tesserae on site; and the import of tesserae as already coloured glass or as cut pieces. At Orvieto, tesserae seem both to have been made on location and brought to the cathedral. A series of on-site glassmakers were employed, paid according to the amount of glass they produced; others were used on a more casual basis, when the need arose. The contact of the on-site master glassmaker Andrea Nelli Zampino stipulated that he was to make the mosaic tesserae at his own expense; in contrast, on two occasions, Donnino of Florence was instructed to bring glass and blue for mosaics to Orvieto (at his own expense), and told that only if it was of sufficient quality would it be bought from him. The documents reveal other materials brought and bought in as required: locally, frit came from the glass works at Piegaro and Monteleone, as did glass and tesserae; glass in shades of blue, gold, red, green, yellow, flesh, black and silver was also brought to the site. The mosaicists themselves imported supplies from elsewhere: for example, Leonardelli went to Siena, Bolsena and Venice for supplies. Glass coloured blue – and the same was true of the use of blue pigment in painting – had a special place and a separate accounting system; when it could not be found in Florence, Siena or Perugia, the Orvieto Treasurer was obliged to search for it at the *Opera*'s expense. The *Opera* also acquired gold and silver leaf and employed a goldsmith to make metallic tesserae on site. It is clear that materials were obtained in any way possible; significantly, however, nothing appears to have come from beyond the Italian peninsula or from Rome. Seemingly northern Italy could provide all the materials needed.

Little snippets of material from elsewhere suggest that the general picture of mosaic-making could have been similar throughout the Middle Ages. They support the view that it must have been, like most arts in the medieval world, an itinerant job. The mobility of craftsmen is a constant feature in the literature, from Constantine V summoning skilled craftsmen from all over the Byzantine Empire to repair the Aqueduct of Valens to the tenth- to thirteenth-century records of trade and workmen preserved in the Cairo Geniza records and to the

thirteenth-century Pope Honorius' bringing of mosaicists from Venice to Rome.[36] The stonemason healed by St Photeine seems to have undertaken a variety of tasks.[37] Less straightforwardly, associations apparent in artistic styles, though these are not easy to interpret, also suggest that artists and mosaicists travelled. Mosaic-making may well have been a job where employment happened in intense spurts, densely focused in time and place – as in sixth-century Ravenna and Poreč. Here, several churches were decorated in quick succession and it is possible to imagine the mosaicists criss-crossing town. Something similar may have been the case in sixth-century Constantinople when the churches of St Polyeuktos, Hagia Sophia and SS. Sergios and Bacchos were all constructed within a close time frame.[38] That Byzantine workshops existed is implied by the eighth- or ninth-century text known as the *Narratio de S. Sophia*, a semi-legendary account of the building of Hagia Sophia. This describes the building work of a hundred master craftsmen each with a hundred workers: the figures are conveniently round but that does not mean that the idea of master and team should be ignored.[39] But whether there were fixed workshops in big cities, say Constantinople or Rome or even Thessaloniki, Antioch and Jerusalem, from where mosaicists went out across the Mediterranean, remains as unclear for wall mosaics as it does for floor mosaics.[40] Construction teams may well have been continuous over generations.[41] This is not to say that a workshop could not both be based in a town and take its craft elsewhere. And plausibly, in the bigger cities, such as Rome and Constantinople, and perhaps also in the Levant, a case can be made for a consistent tradition of mosaic-making, suggesting some form of fixed workforce. However, the core team of master and skilled apprentices/workers might easily have been supplemented on site by local workers and indeed, when a project took time to complete, as at Orvieto, the (local) unskilled labour might well have progressed through the ranks to become mosaic masters, as did Leonardelli. He may then have established his own workshop.

Some evidence from Byzantium suggests that state building projects could be overseen and managed by a state official rather than a master craftsman.[42] Whether the master craftsman was paid for designing the project (or indeed had any design role) or whether he simply built what he was told to build is unknown. Robert Ousterhout has made a case that the designer and the architect of a building worked very closely together and, indeed, that painter (and/or mosaicist, I presume) and architect could have been the same.[43] But Byzantine building practice in the ninth to twelfth centuries seems to have been fluid rather than tightly planned: buildings seem to have been constructed in a slightly impromptu fashion, with no distinction between the design of the project and its execution, and changes to the plans and demolitions of sections whilst on the job the norm rather than the exception. In the case of one church in thirteenth-century Sardis, Hans Buchwald made the point that the sequential nature of building indicated one master for the construction work and then three teams: one for building the church; one for creating the wall paintings and mosaics; and one for constructing the chancel barrier (perhaps a single marble worker).[44] There is clearly an issue about how much training of what sort a builder had and at what point a builder might be an architect in the sense that we understand it.

Access to tesserae must have varied widely between sites, depending on locale and temporal circumstances. It would almost certainly have been easier to access in situ materials in fifth-century Rome say than at a fifth-century small local church in Cilicia. The evidence cited earlier from Poreč (sixth century), where, in some less visible parts of the mosaics, stone and yellow

brick replaced yellow glass or gold tesserae, makes it clear that the supply of glass on a site may not have been unlimited, and this implies that a certain quantity of materials were brought in and that adding to these might not have been straightforward, either in terms of access and speed or because the project was running out of money. In the case of the small church in thirteenth-century Sardis mentioned earlier, it is plausible that the tesserae were produced on site as Sardis had its own secondary glass industry. At Pisa, as at Orvieto, in the fourteenth century, tesserae seem to have been bought locally, though augmented on occasion by itinerant merchants.[45] As noted earlier, the use of stone and painted tesserae might indicate a desire to economise or a shortage of materials rather than an artistic choice.

The question of responsibility for materials seems to vary. Just as we saw the *Opera* providing some materials at Orvieto, so there is some evidence that the patron could and indeed should provide materials in Byzantium. The tenth-century *Book of the Eparch*, discussing 'all artisans who undertake to execute work', and specifying painters (ζωγράφοι – who might include mosaicists), noted that: 'if the artisan is obliged to stop his undertaking through the negligence of his employer, the master of the undertaking' because 'the requisites for completing' have not been provided by his employer, then the artisan can give notice.[46] This suggests that it was the employer's job to provide at least some of the necessary materials (whether the 'employer' should be understood as 'patron' or 'team leader' is another uncertainty). A further section notes that if a building crumbled, the person who built it needed to rebuild it at his own expense, but if the cost was in excess of a gold pound then the proprietor was called on to supply the materials.[47] These regulations are similar to rules known from the Late Roman period.[48]

A TRADE IN TESSERAE?

Supply was a critical issue. Significantly, it is the discussion of how to move things – packing, loading, transport, oversight, unloading, storage, labelling, customs, porters, stowage – that takes up more space than anything in Geniza mercantile letters.[49] In every case for every mosaic, a fundamental question must be asked: how did the tesserae get there? The distribution of mosaics raises intriguing questions about the movement of materials and trade. How tesserae got to some of these sites, in particular to those in more remote locations, suggests a considerable level of determination to use the medium on the part of the patron. Trade in tesserae is implied by the claim made in the thirteenth-century *Paterikon of the Cave Monastery* in Kiev that Greek and Abkhazi (Georgian) merchants brought tesserae to Kiev in the eleventh century.[50] But how much travelled at once is impossible to know. Water would always have been the easiest way to transport glass, because of its weight. As discussed earlier, raw glass and cullet seems to have served as ballast and are found in several shipwrecks from the Roman period and the Middle Ages. There is also evidence for this practice from the Cairo Geniza where a thirteenth-century document records over 8 tonnes of glass being sent by sea.[51] Tesserae, pretty durable and capable of being shipped at any weight, might equally well have worked as ballast, increasing cargo space.[52]

The Romans certainly had the capacity to transport very large amounts by boat around the Mediterranean. In the Roman period, the average tonnage of a merchant ship was perhaps between 70 (the low end) and 200 tonnes; there were much larger ships of up to 500 tonnes; and we know of at least one vessel, the one designed to carry Caligula's obelisk from Egypt to Rome, that must have had a capacity of 1,300 tonnes.[53] In the Late Roman Empire, the most common

vessels were smallish ships of under 75 tonnes and during the fourth and fifth centuries, most vessels had a carrying capacity of 12–60 tonnes. The cost of building such a 60-tonne vessel was about 500 solidi. During the period of the Roman Empire, every year about 420,000 tonnes of wheat were shipped from Egypt to Rome (landing at Ostia) and transported up river to the city. In the sixth century, about 160,000 tonnes of wheat were shipped to Constantinople each year from Egypt.[54] In this context, shipping large amounts of Levantine raw glass, for whatever purpose, was hardly likely to be a problem. But ship capacity slowly reduced and very big ships disappeared until the sixteenth century. In this context, Michael McCormick has suggested that, if in the sixth century there was a population decline and the volume of fiscal products was also in decline, then only essential food and building products would have tended to be transported.[55] Smaller-scale cargoes led to smaller ships. The sixth-century Yassi Ada ship had a cargo of 53 tonnes, whilst that of the seventh-century Serçe Limani's was 30, though in terms of mosaics, as we shall see, this mattered less than might be assumed.[56]

How long trips took inevitably depended on the weather and the type of vessel. In the first century, Pliny claimed the trip between Rome and Alexandria could be managed in six days. The ninth-century author Agnellus indicated that it took three months to get from Ravenna to Constantinople and back by sea, so a one-way journey was perhaps six weeks, but on a slow and heavy transport ship it may have been closer to nine or ten weeks.[57] Letters and news – which travelled lighter and faster than anything else – took between 34 and 46 days (5 to 7 weeks) to get from Venice to Constantinople in the thirteenth century.[58] But sea-going was also seasonal and tended not to happen in the four winter months. So if tesserae ran short on site, getting fresh supplies could, depending on where the mosaic was, potentially have taken too long to be worth the effort. Crucial to this conundrum is the fact that the spread of sites with mosaics that is tracked throughout the second part of the book is not necessarily one linked to geographical features and major trade routes.[59] Although many of the sites known to have had mosaics are coastal, some significant ones are not. For example, the important city of Amorium is situated in the middle of the Anatolian plain. Evidence for mosaics has been found in the city (in the form of over 162 kg of glass mosaic tesserae) and it has been estimated that over 2 tonnes of glass would have been needed to cover the apse conch and walls and the vault over the bema of the Lower City Church alone.[60] Once off the boat, bringing in this quantity of either glass or tesserae overland would have been no easy feat, involving hauling it by cart or pack animal for much of the journey.[61] It has been calculated that a horse carrying goods perhaps covered 30 to 40 km a day, depending on the weight of its packs and how hard it was driven, and increasingly throughout the Middle Ages, as the Roman road system fell into disrepair, roads became nightmarish to travel on, especially in the wet winter months. Indeed, as a rule of thumb, only the most expensive commodities were worth transporting far by road.[62] By both water and road, tolls, customs, wars, bandits, robbers and the weather could all affect the speed and cost of transporting goods. It is pretty clear that if the source of material was not local, it could take a very long time indeed to get fresh supplies, and that the rapid reordering of anything was not necessarily an option. This is another straw in the wind supporting the model of a (known) centralised production of raw glass, ideally distributed by sea, but a (hypothetical) more localised production of tesserae from that glass to suit local needs.

The second part of this book maps evidence for surviving mosaics by century. One of the things that these maps hint at is how far we can

see the distribution of these mosaics in various contexts in relation to what we know of the primary production of glass, especially between the fourth and eighth centuries, when there is a considerable concentration of the medium in the Levant. They also raise a whole series of questions, about access by sea, road and river, about the reuse of tesserae (did Rome have so many mosaics because there was always an accessible, close-at-hand source of materials?), and about the possibility of centres of mosaic-making (is there so much evidence for mosaics in northern Greece in the fifth century because there was a workshop in Thessaloniki?). It would be interesting to plot mosaics against trade networks throughout the Middle Ages and see what role mosaics might play in ideas of a fragmented or united Mediterranean, how and why tesserae got from A (wherever that might have been) to B (which we tend to know). Were glass and tesserae objects of an international luxury trade?[63] Though mosaics were themselves costly objects, glass, at least until the seventh to eighth centuries, was relatively easily accessible and tesserae were not individually costly, though they were required in huge, bulky quantities.[64] We do not imagine tesserae sitting around in shops waiting to be bought by the sack load (though a reference in the *Patria* of Constantinople to 'the place . . . where mosaic tesserae are also sold' suggests this might actually have been the case); rather it feels more plausible to see them as made to commission.[65] In fact, the 'tesserae' trade or the 'coloured glass' trade, whichever we imagine it was, seems closer to the marble trade than to that in silk: a trade involving considerable weight of object in which the finished piece outweighed the raw material by some distance, rather than one in light-weight, small, high-value objects as part of an imperial monopoly.[66] The marble trade was, at least for some time, widespread throughout the Mediterranean at both long and short distances; surely the trade in raw glass, and presumably coloured tesserae, fitted into the same network. It is also likely that the trade in tesserae was affected by changes to the ways in which commerce was carried out in the Mediterranean. By the eleventh century, the great state shipping networks that had moved grain from Egypt to Rome and Constantinople had disappeared. The Cairo Geniza documents offer a picture of a world of private long-distance trade in which the merchant was the key figure and where, increasingly, it was irreplaceable raw materials that were worth transporting, not just from outside the Mediterranean basin, but, in the case of plant ash for glass-making, within the Mediterranean world. The Geniza shows that metropolitan merchants brought the essential raw materials to smaller urban centres directly and then purchased their manufacturers' finished products, allowing, for example, artisans in places such as Ascalon or Susa or even Egyptian villages in the Delta to produce finest-quality textiles for buyers halfway across the Mediterranean. This was a trade network that supplied manufacturing inputs to artisans and then bought their output (sort of work for commission).[67] Where did tesserae fit in? Or, by the thirteenth century, were they not traded but made locally from locally made glass made from imported raw materials? Geographies of trade also shifted. In the Mediterranean world of the eleventh century, the Islamic cities of Fustat, Palermo and Tripoli were major trade centres; Constantinople was not. By the twelfth century, the Italians had become bigger players in the markets.[68] These changes in patterns and networks must have had some effect on supplies of glass and tesserae alike.

MOSAICS: COSTS AND HYPOTHESES

It is widely accepted that mosaic was a far more costly art form than wall painting: on the basis

of the Orvieto figures, it seems that, in the fourteenth century at least, it was up to four times more expensive to have a mosaic rather than a painting.[69] Mosaic was more labour-intensive and the materials needed were more complicated and thus costly than those needed for wall painting. It almost certainly took longer to make a mosaic than a wall painting: there were more stages involved in putting a mosaic together and certainly the last part, the insertion of tesserae, was more complex and time-consuming than anything in painting.

But equally, mosaic was not the most expensive or the most highly valued form of decoration. Marble was. Marbles equalled magnificence. So whilst mosaics mattered and were expensive, marble mattered more. Marble columns, fixtures, fittings and panelling (all of which had to be quarried, shipped, worked and cut to size) were more costly than mosaic in materials, workforce and logistics, and were held in greater esteem. Ancient architectural marbles were rarely mentioned in the Middle Ages without some reference to their cost, and allusions to marbles in accounts of buildings are more frequent and detailed than those to mosaics.[70] Indeed, medieval texts tend to be remarkably silent about the presence of mosaics, whilst it is rare that any narrative about a church fails to touch on its marbles at some point, for this served to establish that costly and potentially rare and not easily obtainable natural materials had been used in the construction of the building. And, as Chorikios said in his account of St Stephen in Gaza, 'A double benefit accrues from these marbles: [they provide] the church [with material] for decorous workmanship and are a source of honour to the cities that sent them, since a man who has seen them and admires them at once praises the donor.'[71] Not only was the donor lauded, but in imperial foundations such marbles articulated the greatness of empire, and the extent of the particular emperor's power: 'our emperor who has gathered all manner of wealth from the whole earth', as Paul the Silentiary phrased it.[72]

Many of the logistical issues about mosaics pertain also to marble, but on a greater scale because of the weight and awkwardness of the medium.[73] For example, one column shaft alone for the nave arcade of S. Apollinare in Classe weighs over 4 tonnes; the church required over 150 tonnes of marble for its columns alone, never mind the rest of the marbling within the building – panelling, and fittings such as the pulpit. S. Vitale needed 188 tonnes for its columns. For Ravenna as a whole, it has been calculated that about 1,556 tonnes of marble were needed over the sixth century. In her calculations of costs at the third-century Baths of Caracalla in Rome, Janet DeLaine made a convincing case that all the marbles (the architectural orders, the floors and the veneers for the walls) cost more than anything else – in prices as well as labour and transport – over 50% of the total spent. Of these total costs, the mosaic floors made up 1%, the marble veneers 20% and the architectural marbles 57%; the wall mosaics were only 15%.[74] The quantity and weight of glass required for mosaics, even on the vast scale of Hagia Sophia in Constantinople (perhaps 225 tonnes), was far less than these figures of marble for Ravenna. Consequently, it is unsurprising that in the Middle Ages, marble *spolia* were particularly valuable, especially as supplies from the great marble quarries of antiquity decreased: reuse was a cheaper, easier and more viable way of getting hold of marble.[75] Rome was a vast repository of the medium, which explains something of its continued popularity there. But even reused marble required work to move it, adapt it and reinstall it.

What mosaics really cost is unknown. However, it is possible to pull together a few scattered references to the costs involved in making mosaics in terms of both the materials and the

workers. The problem is that these are scattered in both time and place and, to an extent, hypothetical. Nevertheless, even with those provisos, it is still worth looking at what is known and then seeking to create some conjectural figures.

1 *Costs for Glass*

A handful of references to the cost of glass in the Late Roman period exist; very little survives from later, until thirteenth-century texts from the Cairo Geniza and material from fourteenth-century Italy. At Oxyrhynchus in Egypt, 6,000 pounds of glass costing 1,320 talents were used in the making of the warm baths of the public bath house.[76] The *Price Edict* of Diocletian, however, provides the only indication of individual prices. It priced glass in six ways.[77] A Roman pound or *libra* of Judaean 'greenish' glass was priced at 13 denarii (ten to twenty times as much as a pottery container of the same size), a pound of Alexandrian glass at 24 denarii, a pound's weight of Judaean glass cups and smooth vessels at 20 denarii, the same of Alexandrian glass at 30 denarii. Second-quality window glass was priced at 6 denarii the pound and best window glass at 8 denarii per pound.[78] (See below, Table 2.)

Table 2 Prices of glass from Diocletian's *Price Edict*

Judaean greenish glass	1 Roman pound (327.45 g)	13 denarii
Judaean glass cups and vessels	1 Roman pound (327.45 g)	20 denarii
Alexandrian glass	1 Roman pound (327.45 g)	24 denarii
Alexandrian glass cups and vessels	1 Roman pound (327.45 g)	30 denarii
Second-quality window glass	1 Roman pound (327.45 g)	6 denarii
Best window glass	1 Roman pound (327.45 g)	8 denarii

As might be imagined, exactly what this means is less than clear. There appears to be a distinction between raw and worked glass, with window glass even cheaper. What the distinction between 'Judaean' and 'Alexandrian' glass might be is not known: it may possibly relate to the origin of the glass as either Levantine or Egyptian, or it may refer to its generic qualities, with Judaean being common blue-green glass and Alexandrian more expensive perhaps because it was deliberately decolourised or even because it was coloured.[79] The *Edict* also priced all glass by weight. But the pricing gap between raw and worked glass in the *Edict* – 7 denarii in the case of Judaean glass and 6 denarii for Alexandrian glass – would have made it almost impossible for a glassworker to survive, once the costs of manufacturing are taken into account.[80]

2 *Costs for Coloured Tesserae*

Of the six types of glass mentioned in the *Price Edict*, none is obviously glass for mosaics or indeed coloured glass. However, it is possible that the next section of the *Edict*, now surviving only in fragmentary form, may have referred to glass for mosaics. This section of the text has been reconstructed as saying that gold glass for mosaics cost 40 denarii per pound, coloured glass 30 denarii and cakes or perhaps uncoloured glass 20 denarii.[81] If so, then it would mean that glass was one of only a few materials where colour was a significant factor in determining price. As already mentioned, the technical skills required to colour mosaic glass probably increased its price, and we also know that some colours (notably red) were harder to make than others.

In this context, incidentally, recycling tesserae was also surely as much an economy measure as an indication of a paucity of material. Building materials were regularly recycled: it saved time

and effort, and thus money. In Rome, where the use of *spolia* was increasingly common in the Middle Ages, there must have been huge quantities of glass tesserae available for reuse – the Baths of Caracalla, for example, used about 254 million tesserae. This may also have been the case in Constantinople, where Basil I is recorded as taking materials, including tesserae, from one building to use in another. Such recycling would have reduced manufacturing costs but still required manpower to scavenge and then to retool for reuse.

And evidence from Orvieto and from Florence shows that mosaicists and craftsmen were not above pilfering and lining their own pockets. Many of the ways in which the contracts for materials at Orvieto are framed – at the craftsman's cost – suggest that patrons did their best to insure against this, but it clearly happened and needs to be acknowledged, even if we cannot draw any conclusions other than that it must have been lucrative enough to be worth the risk. Indeed, in this context, it has been suggested that Franciscans were popular as mosaicists in fourteenth-century Italy because they were more honest and trustworthy – and also charged less for their services.

3 *Costs for Gold*

When it comes to gold tesserae, we may be able to extract slightly more data, thanks to the use of gold and our greater knowledge of its cost in comparison to glass. Various figures for the use and thickness of gold leaf survive from the Classical and medieval worlds (Table 3). Pliny said that 1 ounce of gold (28.35 g) made 750 leaves of 4 inches square (10.2 cm).[82] These leaves would therefore have weighed about 0.038 g each and covered an area of 7.8 square metres. This set of figures was echoed by the eighth-century *Compositiones variae*, and Cennino Cennini's amounts, seven hundred years later, are surprisingly similar. Cennini claimed that over a hundred sheets of gold leaf could be made from one florin (a florin weighed anything between 3.55 and 3.34 g). A sheet of gold leaf in the fifteenth century was about 7 square centimetres and so one hundred sheets weighing about 0.035 g each would cover 0.49 square metres. Cennini also claimed, somewhat surprisingly, that the leaves beaten from one florin could be sold for less than a florin.[83]

What is important in costing gold for mosaics is the thickness of the leaf. The thinner the gold, the

Table 3 Gold leaf: quantities and costs

Author[1]	Quantity of gold	Number of leaves	Size of leaves/area covered by leaves	Thickness/weight of gold leaf
Marco Verità	19.3 g (1 cm^3)	n/a	n/a / 6 m^2	At 6 m^2: 0.167 μm (or 167 nm) At 3 m^2: 0.333 μm (or 333 nm)
Pliny	27.264 g (1 oz)	750	10.2 × 10.2 cm / 7.8 m^2	0.18 μm (or 180 nm) / 0.0364 g or 36.4 mg
Cennini	3.5–3.34 g (1 florin)	100	7 × 7 cm / 0.49 m^2	0.36 μm (or 360 nm) / 0.034 g or 34 mg
Estimates for Byzantine coin	4.5 g (1 nomisma/ solidus)	n/a	0.18 μm > 1.3 m^2 0.33 μm > 0.7 m^2 0.4 μm > 0.6 m^2	

[1] Verità: Neri and Verità, 'Produrre tessere d'oro' and Neri and Verità, 'Glass and metal analyses of gold leaf tesserae'; Pliny, *Natural History* 33, 19, 61; Cennini, *Libro dell'arte*, ch. 138 and Bomford et al., *Art in the Making*, 22.

further it goes. Some measurement of the thickness of gold leaf in actual medieval tesserae has been done, giving measurements in the bracket of 0.4 ± 0.2 μm. On the basis of these measurements, Marco Verità has calculated that 20 g of gold (a cubic centimetre – strictly 19.3 g) yields about 6 square metres of mosaic slab or between 2.5 and 3 square metres of gold leaf.[84] In this instance, the gold is less than one μ deep – about 172 μm.

All of this suggests a fairly consistent thickness for gold leaf – or perhaps better, a consistent thinness of the leaf between 0.1 and 0.3 μm, meaning that a little gold would go a long way. Similar calculations can also be done for silver leaf on the basis of measured thicknesses.

4 Costs for Workers

The *Price Edict* of Diocletian gave various figures for the maximum payments to workers in various trades. In terms of craftsmen, it proposed 50 denarii per day for the *tessellarius* and 60 for the *musearius*. These compare to 50 denarii per day for masons and carpenters, 75 for wall painters (*pictor paretarius*) and 150 for 'image painters' (the problematic *pictor imaginarius*). On the basis of these figures, it has been suggested that the cost of a floor mosaic might lie somewhere between $^{1}/_{50}$ solidus to ⅔ solidus per square metre.[85] To put these earnings into context, the *Price Edict* decreed that stonemasons, carpenters, wagon-makers, blacksmiths and bakers were to earn the same as the *tessellarius*, whilst marble-workers (possibly in *opus sectile*) and shipwrights should earn the same as the *musearius*. Farm labourers were to be paid 25 denarii.[86] The *Price Edict* should not be taken literally as indicating normal standards of pay, and it should really only be thought of in its late third- and early fourth-century context, but it is interesting for what it suggests about relative indications of standing between different craftsmen and occupations. By the sixth century, a stone cutter earned just less than 12 nomismata a year, something like 78 denarii a day, a 50% increase on the *Edict*'s wages, though how universal this increase was remains a mystery.[87]

But it is also perfectly possible that different workers were paid at different rates and in different ways. At Orvieto, a thousand years later, workers at the lowest level were paid by the day or on a piece-work basis: glass cutters (*incisores vitri*), for example, might get 6–9 soldi a day, paid out once a week. The glass masters (*magistri vitri*) were paid for the manufacture of glass by the pound of glass. The mosaic masters (*magistri mosaici*) were paid by both day and month and on completion of the work. Orcagna received 60 florins for his mosaic of the Baptism of Christ. Giacomini was paid a monthly salary of 10 florins and Leonardelli a daily wage of 21 soldi (a monthly rate of 6 florins), but earned a further 50 florins for his mosaic of the Annunciation to St Anne.[88] In contrast, painters seem not to have been paid by the day or month but only by the project, and that amount was debited at intervals, generally as they needed the money for production. The one known exception is Duccio, in his contract for the *Maestà*, where a daily fee of 16 soldi, paid as a monthly amount, was stipulated.[89]

5 Travel Costs

How much it might cost to transport raw glass or tesserae is unknown; no written source mentions glass and its value in this context, except in a very general fashion and with respect to luxury glassware.[90] The *Price Edict* gives some sense of transport costs by giving rates for sea travel.[91] From these, Janet DeLaine, looking at the third-century Baths of Caracalla in Rome, calculated that travel cost by sea was roughly 0.01–0.024 denarii per tonne per mile, with different figures for river and land transport.

6 *Speculative Costs*

So what material exists about costs and issues around costs for mosaics is limited. Nonetheless, Janet DeLaine has used what there is in her work on the Baths of Caracalla to produce some very interesting though, as she is at pains to stress, highly speculative figures.[92] The Baths were an enormous imperial undertaking (the central block of the Baths is some 24,000 square metres in area; in contrast, Hagia Sophia in Constantinople is about 5,616 square metres) that took five years to complete. This means that everything can be calculated in this context, and, by maximising the use of labour and making sure the logistics work, DeLaine was able to arrive at the shortest possible schedule. This also allowed her to calculate the potential numbers of workers involved, taking as her limits the actual time taken and shortest practical time it could have taken. In terms of doing this for the building overall, she had to work out the probable sequence of construction. It was in this context that she suggested that the tesserae were made in advance, probably a year before they were needed, thereby opening up questions about scheduling the supply of materials. DeLaine produced figures for all aspects of building the Baths, from digging the foundations and making the bricks to painting the walls and laying the floors, covering time taken, workforce required and costs, including materials, transport and labour. In terms specifically of wall mosaics, she made the case that wall mosaic took almost twice the labour needed for stucco but considerably less than that needed for veneering the walls in marbles and hard stones, since sawing the marble to size took a very long time indeed.[93]

Her calculations for the Baths serve here as the basis for my own more limited calculations for some of the costs involved in making mosaics and allow me to compare my costs to hers. However, there are several problems inherent in applying DeLaine's figures to medieval mosaics. First, the Baths of Caracalla and Diocletian's *Price Edict*, on which DeLaine built many of her calculations, are at least within a hundred years of each other and so are a more reasonable comparison than say the *Price Edict* and the thirteenth-century apse of S. Maria Maggiore in Rome; second, DeLaine had accurate figures for the dimensions of the Baths, measurements which are lacking for the mosaics of many medieval churches. In many cases, the figure for the extent of mosaics I offer is an estimate based on published measurements. Further, the relationship of the denarius to the solidus (and indeed to other forms of currency) was far less fixed and concrete than I have allowed it to appear in my calculations. Nevertheless, there is mileage in using DeLaine's figures as a basis, for it enables some calculations to be produced that, however rough, ready and approximate, do, in my view, also offer some insights into plausible quantities, costs and timescales. But I should emphasise that the figures produced here are not 'real' costs but suggestive comparative data.

My choices in this section have been dictated by what details I have been able to get hold of in relation to accurate measurements of spaces. For example, I have not used the mosaic at Kiti because it is impossible to get hold of a reliable measured ground plan and section. In contrast, good plans of both Lythrankomi and Hagia Sophia are available.[94] At the Baths of Caracalla, DeLaine simply took the wall spaces without taking out the area potentially occupied by windows and other architectural features; I have chosen to do the same here, and I have also calculated the amount of gold mosaic tesserae needed as if the whole area were to be covered in gold (i.e. I have not calculated the space that figures not in gold would occupy or the spaces created by the gaps between tesserae); I have also not

allowed for wastage. Throughout, I have consistently rounded numbers up. I realise that this will distort the figures, but my choices tend to move them consistently up towards the greatest amount, and that, I think, is useful.[95]

In the Baths of Caracalla, DeLaine took the average size of a tessera as 0.7 square centimetres and so worked on a basis of 15,000 to the square metre, which does not allow for space between the tesserae. She calculated that there were 16,900 square metres of glass wall mosaic in the Baths. Consequently, 254 million tesserae were needed, weighing 1.5 grams each, at 15,000 to the square metre. This meant 2.5 tonnes of glass were needed for each square metre of mosaic and about 380 tonnes in all.[96] Delaine also calculated that, including plastering, designing and time for an assistant, it would have taken 5.8 man-days (one person's working time for a day, taken as 12 hours) to mosaic each square metre.

From these figures, I am going to take three central ones:

- The average size and weight of one tessera as 0.7 square centimetres and 1.5 grams. This works as well for the Middle Ages as it did for the Baths
- The figure that 15,000 tessera cover 1 square metre and weigh 2.5 tonnes
- That it took 5.8 man-days to cover 1 square metre of wall (though actually, I suspect that the more complicated the figural design, the longer it took, and that this may well be a considerable underestimate).

After having established some approximate quantities and times, I will turn those figures into costs. In terms of labour, I will use DeLaine's rate of 60 denarii a day. In terms of materials, as DeLaine did, I am going to take the price of coloured tesserae at the *Price Edict*'s 30 denarii a pound. For gold tesserae, I am going both to use the *Edict*'s 40 denarii per pound and also to produce calculations based on the weight of gold used translated into the number of solidi needed to produce that weight of gold.

Table 4 covers quantities of glass and tesserae and relates them to prices for labour and coloured glass. Table 5 deals with quantities of gold glass and their relation to actual weights of gold and gold coins.[97]

Although the quantities of tesserae revealed by these calculations often seem huge, in the millions, when they are translated into tonnes, they are less daunting.

In Hagia Sophia in Constantinople, with 9,925 square metres of mosaic, just under 150 million tesserae may have been needed, approximately 224 tonnes of glass.[98] Although this sounds like a lot, it would only represent just over two and a half times one lot of glass from the Tyre furnaces. Transporting it would have required five vessels the size of the Yassi Ada ship or eight the size of that from Serçe Limani. But at the point that Hagia Sophia was built, the Byzantines were importing over 160,000 tonnes of grain a year from Egypt, which suggests that the quantity of glass, though large, was not unmanageable. If we just look at the area of the dome, including the space divided by the windows but not taking out the windows, it measures 1,139 square metres. Just over 17 million tesserae would be required, at a total weight of 26 tonnes. This is a fifth of the production capacity of the Tyre furnaces and less than one cargo for the Serçe Limani ship. The glass for the Hagia Sophia mosaics could have cost the emperor something like 8,513 gold solidi (about 118 pounds of gold) for the whole and 988 for the dome. Given that the state had an annual revenue of 5,000,000 solidi in AD 530, increasing to 6,000,000 after Justinian's reconquests by AD 550, this was a small proportion of imperial income.[99] To put it into perspective with other figures relating to the construction of the church, John Lydos suggested that 4000 pounds of gold (about 288,000 solidi) were spent on Hagia Sophia in one year alone and

Table 4 Hypothetical costings for mosaics

Building	Approx. m^2 of mosaic	No. of tesserae at 15,000 to m^2 (1 tessera = 0.7 cm^2)	Total weight in kg/tonnes (1 tesserae = 1.5 g)	No. of shiploads Serce Limani (30 t)/ Yassi Ada (53 t)	No. of man-days for 1 man working alone (5.8 man-days to cover 1 m^2)	Labour costs per man in denarii/ **solidi** (rate of 60 denarii a day and 2,400 denarii to the solidus)	Glass cost at 30 denarii to Roman pound of coloured glass (1 Roman pound = 328.9 g)	Glass cost in gold solidi (at 2400 denarii to the solidus)	Glass cost in pounds of gold (at 72 solidi to the Roman pound)
Baths of Caracalla	16,900	253,500,000	381 t	13/8	98,020 days 269 years	*174,840*/**73**	34,752,204	14,480	201
Lythrankomi	19.17	287,550	432 kg	Less than 1	111 days 16 weeks	*240*/**0.1**	39,404	16	0.23
H. David	13.75	206,250	310 kg	Less than 1	80 days 11 weeks	*180*/**0.075**	28,276	12	0.17
H. Sophia, Istanbul	9,925	148,875,000	224 t	8/5	57,565 days 158 years	*102,660*/**43**	20,431,742	8,513	118
dome	1,139	17,085,000	26 t	Less than 1	6,606 days 18 years	*11,760*/**5**	2,371,542	988	14
Sinai, St Catherine's	46	690,000	1035 kg	Less than 1	267 days 38 weeks	*480*/**0.20**	94,406	39	0.55
Monreale	6,318	94,770,000	143 t	5/3	36,644 days 100 years	*65,340*/**27**	13,043,478	5,435	76
Rotunda, Thessaloniki	1,414	21,210,000	32 t	1/less than 1	8201 days 23 years	*14,640*/**6**	2,918,820	1,216	17
Dome of the Rock	1,280	19,200,000	29 t	Less than 1	7424 days 20 years	*13,260*/**6**	2,645,182	1,102	15
S. Maria Maggiore apse	177	2,655,000	4 t	Less than 1	1027 days nearly 3 years	*1,860*/**0.8**	364,853	152	2.1
Orvieto	109	1,635,000	2.5 t	Less than 1	632 days nearly 2 years	*1,140*/**0.5**	228,033	95	1.4

Table 5 Quantities and speculative costs of gold

Building	m^2 of gold mosaic (i.e. extent of mosaic)	Thickness and weight of gold[1]	Weight of gold in grams and kilos	Weight in Roman pounds (1 Roman pound = 328.9 g)	Number of solidi to produce this amount of gold (72 solidi to Roman pound; 1 solidus = 4.5 g of gold)	Glass cost at 40 denarii to Roman pound of ?gold glass (1 Roman pound = 328.9 g)/ Gold solidi (at 2,400 denarii to the solidus)
Lythrankomi	19.17	0.4 µm / 7.7 g to the m^2	148 g	About half a pound	33	40,140/**17**
H. Sophia, Istanbul	9,925	0.4 µm / 7.7 g to the m^2	76 kg	231	16,889	20,897,850/**8,708**
St Catherine's	46	0.4 µm / 7.7 g to the m^2	354 g	About 1 pound	79	13,203,270/**5,502**
Dome of the Rock	1,280	0.4 µm / 7.7 g to the m^2	10 kg	30	2,222	2,674,950/**1,115**
Monreale	6,318	0.4 µm / 7.7 g to the m^2	49 kg	149	10,889	13,203,270/**5,502**

[1] These are based on the figures of Neri and Verità, 'Produrre tessere d'oro' and Neri and Verità, 'Glass and metal analyses of gold leaf tesserae'.

Prokopios indicated that the sanctuary of the church contained 40,000 pounds of silver (approximately 200,000 gold solidi).[100] Incidentally, the Prefect of Africa in 534 earned 7,200 solidi a year as his official wages, and almost certainly increased that significantly.[101]

At the other end of the scale, the 432 kilos of glass required for the apse of the Panagia Kanakaria at Lythrankomi in Cyprus (perhaps a sixth-century mosaic) would have fitted very easily into the hold of even the relatively small Serçe Limani ship. This glass could have cost about sixteen gold solidi. On top of that, a single mosaicist working on the site could have earned 0.1 of a solidus a day (at the putative rate of 60 denarii a day). In comparison, a soldier might earn about 6.5 solidi a year, which translates to a rate of about 43 denarii a day. The variations on costs and time would be further affected depending on the size of the labour force. At Hosios David in Thessaloniki, the fifth-century mosaic involved even fewer tesserae than that at Lythrankomi and the materials could therefore have cost the unknown woman patron about 12 gold solidi, a little less than the annual wage of a head tax-collector at 14 solidi.[102] Actually, it is the quantity of tesserae that seems the unnerving figure: imagine cutting 150 million tesserae for Hagia Sophia. By DeLaine's figures, this would have taken 1 man 19 years – or 20 men less than a year. In this context, the reuse of mosaic tesserae may not indicate a 'perennial shortage of tesserae' so much as a short cut in manufacturing costs.[103] It would reduce the labour force and the materials needed, rather than reflecting any technical lack or shortage, and surely the presence of old tesserae among the spolia of medieval Rome made a difference to the mosaic industry there. Setting the mosaic in Hagia Sophia was potentially quicker than cutting the tesserae, taking one man over four and a half years to complete – or 20 men less than half a year. Hagia Sophia is supposed to have been completed within five years. The mosaics could not have been installed until the roof was on the building – DeLaine suggests that this took place in the final year of work for the Baths of Caracalla. She also proposed that tesserae for the Baths were brought in and cut over the last year in advance (a workforce of 60 being needed for the glass), and we might hypothesise the same for Hagia Sophia. In that case, if they were cut on site in years 4 and 5, a workforce of at least 10 cutters would suffice. Assuming Hagia Sophia was completed enough in four years, then if the mosaics were done in a year, this would have required a workforce of at least 158, plus assistants and unskilled labour. To give that a broader context, the Baths of Caracalla, by DeLaine's reckoning, had an average workforce of perhaps 7,200 as a minimum.[104] In the building of the Suleimanye Mosque in Istanbul, over 3,000 workmen were employed on site; at new St Peter's, 600–800.[105] We might think here about how many men could be fitted into the space available in the building. But for emperors and popes, building projects were a useful way of employing people, feeding them and keeping them off the streets. And once a skilled and semi-skilled labour force was created, it was perhaps useful to keep it to hand and busy with one project after another.

The other mosaics in the table fall between these two ends of the scale. Only those of Monreale in twelfth-century Sicily come close to Hagia Sophia. It has been calculated that the mosaics at Monreale needed at least a million tesserae.[106] But this is well short of the reality. The Monreale mosaics have been estimated to cover some 68,000 square feet, about 6,318 square metres. This would need closer to 95 million tesserae (perhaps 143 tonnes) – about five Serçe Limani shiploads. If all of them were gold (and they are not), this would represent over 49 kg of gold. If we knew the value of gold in twelfth-century Sicily, then it would be possible to convert that into a currency figure.

GOLD MOSAIC TESSERAE

Turning now to gold tesserae. The idea that gold tesserae were removed from mosaics in order to melt them down for the gold has been a recurrent explanation for the removal of tesserae, as at the Church of the Holy Apostles in Thessaloniki, for example, where almost none of the gold mosaic remains, leaving the figures oddly located against a plaster background. This may well have been the case, but, as Table 5 implies, it would have been a tricky and time-consuming task for relatively minor rewards in the end. The plunderers were unlikely to have realised just how little gold was attached to each tessera.

At Hagia Sophia, it has been suggested that 1,089 Roman pounds of gold were needed for the 9,925 square metres gold backgrounds, the apse mosaic alone involving some 13 pounds of gold. Figures such as these would suggest that gold glass mosaic was highly expensive.[107] But it depends on the thickness of the leaf. As far as I know, there are no published figures for the thickness of the gold leaf in any of the tesserae from any period at Hagia Sophia. However, if we use the thickness suggested by Marco Verità as an average (see Table 3), then if the gold leaf was 0.4 μm thick, only 231 Roman pounds of gold or 16,889 solidi would have been required in Hagia Sophia, the equivalent to about 76 kg of the metal.[108] If the *Price Edict* figure of 40 denarii to the pound is really that for gold glass, then, as the last column in Table 5 makes clear, that glass might have cost only 8,708 solidi – half the solidi actually needed for the gold in the gold leaf. So unless the gold leaf was beaten much thinner than has been realised or measured, this particular interpretation of the *Price Edict*'s figure seems unlikely.

At the other end of the scale, if the whole mosaic at Lythrankomi had been made from gold tesserae, then at a thickness of 0.4 μm over the 19.17 square metres of mosaic, about 148 g of gold would have been needed. This figure translates into the same quantity of gold as that in 33 solidi. If, however, we accept the proposed reading of the *Price Edict* as saying that gold glass sold at 40 denarii for the Roman pound then the 432 kg of glass required at Lythrankomi would have cost 23,417 denarii or 9.76 solidi. This is considerably less than the 33 solidi required for that much gold leaf.

Some comparisons can also be made with the value of gold in other media. The *Liber Pontificalis*, the Latin texts describing the lives of the popes from St Peter himself to Stephen V in the ninth century, is full of details of papal (and other) gifts to various Roman churches. These are detailed by weight. So, for example, in the sixth century, in the pontificate of Pope Hormisdas (514–23), gifts adding up to a total weight in gold of 57 Roman pounds were given to churches in Rome by the Emperor Justin I. At 72 solidi to the pound of gold, these may have weighed in at 4,104 solidi, about a quarter of the amount used for the gold mosaics of Hagia Sophia.[109] What this does not reveal is how much more the vessels cost than the value of the gold because of the work that went into making (and presumably decorating) them.

These figures for Hagia Sophia at one end of the scale and Lythrankomi at the other can also be set approximately into what is known about wages in the sixth century. In Justinian's *Edict* of 534, at the top of the scale, the Prefect of Africa earned 7,200 solidi (100 pounds of gold), taking him a year and a half to pay for Hagia Sophia; the chief doctor got 99 solidi (Lythrankomi, no problem); the head of the bodyguard received an annual wage of 14 solidi, as did the head tax-collector, whilst his subordinates received between 11.5 and 9 solidi.[110] A donkey for

military use could be bought for 3 solidi in the sixth century, making the coloured glass at Lythrankomi something like the equivalent of five military donkeys. None of this really reveals how costly mosaics were in terms of the share of an individual's disposable wealth that they consumed. Nonetheless, the distribution patterns for mosaics apparent through the maps of Part II make it very clear that certain people, especially emperors and popes, had a fair amount of disposable income, enough to spend on mosaics, even in times of trouble – fifth-century Rome, sacked twice, for example.[111]

Some further conclusions can be drawn from these figures. It may well have been fairly straightforward for a smaller church like Lythrankomi or Kiti to obtain glass (from local factories in the Levant, just across the way) for mosaic. Similarly, the growth of the Venetian glass industry in the thirteenth century must have affected the making of mosaics in that city, especially at S. Marco. Logistics will also have played a part in costs. The amount of money put into the mosaic will have affected how many workmen were used, how much time there was for planning and design, what materials were used, and all the other logistical issues raised in this chapter. And here we simply do not know. It is likely that agreements were made with the patron to pay daily wages for craftsmen of different skills and materials. These economic aspects suggest that at churches such as Kiti and Lythrankomi where only the apse mosaics survive, this may be because only the apses were mosaicked. In other words, a patron might be able to afford a bit of mosaic but only the really wealthy could have the whole building done in mosaic. And there may also have been a correlation between the nature and the size of a mosaic programme and its location in relation to the sources of the materials for mosaics. The mosaics at Lythrankomi may have been affordable in part because of the closeness of the site to glass factories in the Levant. In contrast, importing glass to Constantinople would have been a more costly and complicated procedure.

The Baths of Caracalla and the mosaics of Hagia Sophia illustrate just how much glass was needed for one very big public building. They also raise questions about the supply of glass, the organisation of production, the siting of workshops and the size of potential glass-working communities in Rome and Constantinople. In the case of the Baths, DeLaine made the point that the overall undertaking was a huge project and the mosaic workforce was less than 3% of the total workforce involved: it is important to see mosaics as part of a more composite whole, especially when we think they were installed at the same time that the building was constructed. The costs of the materials – which is the cost of the human action in making them usable plus the transport cost – underlies the logistical elements of any building project, the high level of planning required to get the job completed in the right order, and the control of resources affecting the speed of the work through the ability to pay for workmen and materials.

In this context, wall mosaics were clearly a major industry (albeit a restricted one with perhaps limited workshops) in terms of the financial investment required and one in which issues of supply were entangled with cost, frugality, taste and pretensions.[112] The quantity of mosaic in a building is one way to rank mosaics in terms of its relative value: more costs more. But it is also true to say, as I pointed out in the previous chapter, that the materials used also made a difference. Gold and silver tesserae were almost certainly more expensive than coloured glass; red glass was perhaps the costliest of all. So as well as how much mosaic, there is the question of what sort. The palette of the Lythrankomi mosaics involved gold and silver, but the reds are quite often painted stone, in contrast to those at Kiti. Was this a decision based on cost or availability?

In Hagia Sophia, huge amounts of metallic tesserae were used throughout the building, but there are places, notably in ninth- and tenth-century mosaics, where red glass is again replaced by painted stone. Here, surely, cost was less of a concern and this may reflect availability. Is the use of white marble rather than silver in St Demetrios in Thessaloniki and in the Oratory of Pope John VII in Rome evidence of cost-cutting or of the availability of materials? We might expect the most important patrons – popes and emperors – to be able to afford all they needed. In this context of relative costs and quantities, it would be very useful to be able to plot out the relative amounts of glass against other materials in various mosaics to get a sense of where and how much stone was employed: I suspect the reasons may often have more to do with costs and local availability (especially if materials from floor mosaics was being reused) than the ethnic origins of the mosaicists as has previously been suggested.

Each mosaic had its own patron and that person commissioned the mosaic for a variety of reasons, public and personal, material and spiritual. Discussion of these reasons will provide much of the theme for the second part of this book. But the material discussed here in Table 4 gives some indications as to what they may have paid for the privilege. The banker Julianus Argentarius is said to have spent 26,000 solidi (over 360 pounds of gold and over three times the annual wage of the Prefect of Africa) on the church of S. Vitale in the sixth century; elsewhere, 14,400 solidi have been calculated as an average cost of a Byzantine church.[113] The costs and logistics of making a mosaic were such that it was not a cheap option and this brings us to the question of who could or would have paid out for a mosaic, and why. What was the value in mosaic?

Chapter 4

THE VALUE OF MOSAICS

THE PREVIOUS CHAPTER ENDED with a question: why, considering the amount of planning, work and money involved, did patrons pay out for mosaics? The expenditure on a mosaic means that the use of the medium gave out messages around wealth in terms of public and private ostentation, emulation and imitation. The outlay and materials made it into an art form signalling material splendour, even more so because, unlike several other costly art forms, glass mosaics, even gold tesserae, could not easily be melted down and turned back into cash. Unlike silverware, say, mosaics only consumed money, and were for life. And this too may have been a factor in the short cuts and economies in making mosaics, cutting corners where they could be hidden. But what a mosaic looked like reflected in some way and on some level what its patron wanted and what its patron valued, beyond the price alone. So what may patrons and audiences have found attractive about mosaic as a visual art form? How was it rated, described and esteemed? What was the value and standing of mosaic within medieval society?

It is clear that the medium itself – complicated, tricky and costly to make – had some worth. One of the arguments of the second part of this book is that the very medium of mosaic carried a certain symbolic weight and meaning derived from its Roman imperial past and that this was influential in its continued use. Here, however, I am concerned with what its audiences appreciated in terms of the appearance, the aesthetics, of the medium. I am also interested in the use of mosaic to portray God, rather than the particular ways in which God was portrayed. Much scholarly work on medieval images focuses on what the imagery, the iconography, may have meant, how it can be interpreted, how we should read it, and how audiences in the past may have understood it: why particular scenes were chosen, why Christ might be shown as Pantokrator or

Emmanuel, as a Child or enthroned in Glory, whether Mary is depicted as Mother of God or Virgin or Queen of Heaven. These questions of iconography matter but they are not my focus. Images never had one meaning and one meaning only: they were always treasured for more than one thing. What the patron may have intended in commissioning an image is only one possible meaning of that image; what the audiences, in the plural, may have seen in it is another matter altogether. What a pilgrim may have paid attention to or thought about in the great Roman pilgrimage church of S. Maria Maggiore in the fifth or the fourteenth century may have been very different from what the papal entourage using the church as a papal basilica saw or what the wider Roman population may have noticed. And this will all have changed over time as familiarity bred contempt or refurbishment attracted attention.

What can be deduced about the value of mosaics has to be drawn out from medieval writings about mosaics or, more accurately, in which mosaics might appear. Intriguingly, in light of its cost, when describing buildings, mosaic is not invariably mentioned by authors as being present, even when we know it was. Indeed, there are cases such as the Church of SS. Cosmas and Damian in Rome when, because the mosaic survives, we know a church was decorated in the medium, but no text about the building bothers with this detail. Nevertheless written sources note the existence of mosaic often enough to suggest that points could be scored, for good or bad, through a reference to its presence.[1] Mosaics are never mentioned in Late Antique and medieval texts simply to record their existence (presumably because that was not a good enough reason). Authors, generally elite, educated and male, added details to their accounts for a purpose, and that reason might relate to politics, piety, point-scoring, to any of the reasons why people write things down. What texts record is also influenced by the types of texts they are: a romance puts it differently from a history; a panegyric has a different set of conventions from a hagiography. Within a written text, the presence of mosaics has been used to comment on the patron. Commissioning a mosaic might underline his piety and generosity (and glory and power): the *Life of Basil*, for example, a text written to extol the Emperor Basil I, used references to gold mosaic as one part of its account of Basil's building works to underline the combination of art, riches, faith and zeal demonstrated by the emperor in his foundation of the Nea Ekklesia and the Church of Elijah, and in his secular foundation, the Kainourgion.[2] If emperors employed art to demonstrate the power and glory of their rule, for public display, and to educate their subjects into right thinking, then Basil's employment of costly mosaics ticked all of those boxes, used as it was to depict himself and his family with God, highlighting his philanthropy and piety as a church-builder and asserting his status as a 'good' emperor.[3] Similarly, in Rome, the *Liber Pontificalis* in its accounts of papal deeds included details of mosaic work as one way of displaying papal generosity and ecclesiastical regeneration. But funding mosaics could also be used to criticise a patron's wasteful habits. The Byzantine author Michael Psellos' eleventh-century account of the Emperor Constantine IX Monomachos' work on his church of St George of the Mangana talks of the 'gold-leaf' on the roof and the 'precious green stones encrusted' on the walls in patterns and floral designs, establishing the spendthrift nature of that emperor's project, which involved much wasteful and expensive demolishing and reconstruction purely for wanton self-promotion.[4]

Pilgrims' accounts had a different agenda, one in which mosaics featured as a (relatively minor) part of the religious wonders they had seen, in terms both of the wonderful sights beheld and of the wonder evoked by the spiritual significance of

those sites. So, for example, Daniel the Abbot (1106–8) recorded that in the Church of the Anastasis in Jerusalem, 'On the great altar the Creation (?) of Adam is depicted in mosaic; above there is a mosaic of the Lord being raised up and on either side of the altar on two columns there is a mosaic of the Annunciation', as if to remind his viewers to keep an eye open for these sights, whilst Stephen of Novgorod, who visited Constantinople in 1348 or 1349, noted simply that 'the Saviour is done in mosaic, a large figure and very high' at the Pantokrator Monastery.[5] Mosaics were not really what Christian pilgrims had come to see and venerate. In contrast, descriptions of the mosaics of the great mosques of the Islamic world, those of Medina, Damascus and Cordoba, or of the Dome of the Rock in Jerusalem, hailed the generosity and munificence of their patrons and the glory that these buildings brought to the Arab world. 'The mosque [the Great Mosque of Damascus] is the most beautiful thing that the Moslems possess today'; 'the mosque of Damascus, one of the wonders of the world in its beauty and uniqueness; to describe it adequately would take too long'.[6] Nevertheless, whatever their agenda, such narrations provide some hints as to what it was about mosaics that patrons and audiences alike valued.

VALUING APPEARANCES

A key aspect was the visual impact offered by mosaic as a medium. An earlier chapter discussed the visual effects that could be created through the use of mosaic and the skills in the laying, positioning and choice of colours that were needed. These were key aspects of mosaic's value. The ways in which it could be used, deliberately or unconsciously, to create effects of brightness and brilliance, and of polychromacity and changing colours, were frequently remarked upon. A large number of authors across time and place emphasise light and brightness as important aspects in the appearance of buildings and indeed works of art more widely, and the place of mosaic in creating these visual effects. The dazzling, glittering, sparkling effect of mosaic and its ability to create light is consistently and repeatedly esteemed and praised by audiences, whether western or eastern, Christian or Islamic. Buildings 'glitter with unspeakable brightness'; within them, authors talk of the 'dazzling appearance' of mosaics, adorned with gold tesserae 'as the firmament is with shining stars', 'from which a glittering stream of golden rays pours abundantly', rays that 'strike men's eyes with irresistible force. It is as if one were gazing at the midday sun in spring when it gilds each mountain top.'[7] These are aesthetic qualities valued also in more prestigious marbles, which provided 'marvellous metallic veins of colour like flowering meadows', and were described as 'gleaming bright', 'translucent' and 'coloured like flowers'.[8] As a result of the use of marble and mosaic, a building like Hagia Sophia in Constantinople 'was singularly full of light and sunshine; you would declare that the place was not lighted by the sun from without, but that the rays are produced within itself, such an abundance of light is poured into this church'.[9] Likewise, the Chrysotriklinos, a great reception hall in the imperial palace in Constantinople, was 'a blooming and sweet-smelling rose garden' with its mosaics 'imitating the colours of freshly-opened flowers'.[10] Western Christian authors also spoke of churches filled with 'shining light', 'bright with marbles', of 'luminous mosaics' and ' glittering gold', of mosaic 'like fields'.[11] In the churches of Rome, many of the mosaic inscriptions below the mosaic scenes emphasise the same points about the light-bringing qualities of mosaic: at SS. Cosmas and Damian, the sixth-century inscription opens 'With bright metals, the splendid hall of God shines/in which the precious light of faith flashes even more radiantly'; in the ninth century, this



Figure 54 One of the wonders of the world: the (partially restored) mosaics of the north portal of the Great Mosque at Damascus, eighth century.

was echoed at S. Cecilia where, 'Built with diverse metals, this bounteous house shimmers with light.'[12] These inscriptions use a vocabulary full of words referring to shimmering and luminescence – *micare*, *fulgere*, *radiare*; the mosaics themselves are described as *metallis*, 'metal', a reference to the golden backgrounds; the brilliance of mosaic is compared to sacred water; gold tesserae were seen to have the ability to capture daylight.[13] Similar qualities were valued in the Muslim world, where the brightness and colours of the mosaics and their tesserae are again highly praised, as are their light-bearing qualities. Indeed, some authors saw not only the Great Mosque of Damascus itself as a wonder of the world, but so too, as a further wonder, were its mosaics. '[The Ṣaḥn] is entirely paved with white marble and the walls are faced with variegated



Figure 55 Detail of the mosaics of the north portal of the Great Mosque at Damascus, eighth century: fantastic scrolling ornament and the bright gleam of gold.

marble up to the height of two fathoms and thence to the ceiling with polychrome mosaic, in the gilt parts of which are pictured trees, cities and inscriptions of the greatest beauty and delicacy of exquisite workmanship' (Figs. 54 and 55).[14]

The element of mosaics most regarded was their gleaming, light-bringing qualities. I have already discussed some of the technical details around the ways in which light was shown and used within mosaics to create focal points – the collection of light in the squinch between Mary and Gabriel at Daphni, for example. In the Zeno Chapel of S. Prassede in Rome, behind the altar a golden Christ-Child seated on his Mother's knee holds a scroll saying 'Ego sum lux', 'I am the light'; in the vault of the chapel, a bust length Christ is held up by angels in a blue roundel against a gold background, reflecting light all around (Fig. 56). This creation and presence of light had a spiritual dimension in the medieval Christian and Islamic worlds. In Christianity, the saints might shine like stars; Christ, the light of the world, was transfigured and revealed in his divinity on Mount Tabor through light; his divine light stood in contrast to the dark of ignorance; the Kingdom of Heaven is a place of light and splendour.[15] In Islam too, God is light and Paradise shines with divine light: the Qur'an itself represents a descent of divine light on earth, as repeatedly asserted in the text. Colour, as in the Christian world, was light made material and so the very light effects created by mosaics were themselves symbolic of God and the light of God. Mosaic colours too spoke of light and darkness. Time and again, at the Dome of the Rock, in the Umayyad mosques of Damascus and Medina, Qur'anic mosaic inscriptions are written in gold lettering against a dark background, a resonance of light over darkness.[16]

These qualities of brightness seen in mosaic were also important elements in Byzantine and medieval Western theories of colour. In both the Classical and medieval worlds, colour tended to be appreciated as much, if not more, for its brightness as for its hue: that is to say that qualities of brightness, shimmering, shininess and saturation were admired perhaps more than whether an object was blue or red.[17] There was



Figure 56 Glitter and light: Christ the light of the world supported by angels in the vault of the Zeno Chapel, S. Prassede, Rome, ninth century. The orange highlighting of the angels' arms and of their faces and Christ's remarked on in Chapter 2 is also visible.

a belief that the primary object of sight was colour, that colours were mixed in the eye, and that colour worked on a scale from light to dark.[18] All of these are concepts that sit well with the use of colours in mosaics. The attraction of polychromacity, multicoloured effects, was not unique to the medium, but mosaics created a particularly brilliant, glittering effect of colour and light (Fig. 57). Its iridescence and the shining, gleaming qualities of mosaic also conveyed a sense of luxuriance and elation and of a dynamism of colour through its concern with flowing, changing effects, a dynamic that paint did not create.[19] These were all aspects of mosaic that were consistently valued and mentioned by authors. However, it may also be the case that increasingly, perhaps as a result of familiarity, such qualities were less and less remarked upon. From the eleventh century on, in inscriptions in the Roman churches, mosaic was not mentioned in the same way as it had been; in Byzantine sources, the subject matter of mosaic images gained more attention than their brilliant light-bearing effects.[20] As we shall see later in this book, in the fifteenth century the production of mosaics dropped significantly; a whole range of factors are associated with this, but it is possible that a change in what was valued in aesthetic terms also played a part.

A different, more overtly materialistic valuing of appearance is apparent in the admiration of the richness of artistic decoration, the predominance of gold, precious stones and valuable marbles above all. The splendour of heaven derived both from its light and from the costly materials from which the New Jerusalem was built. A constant

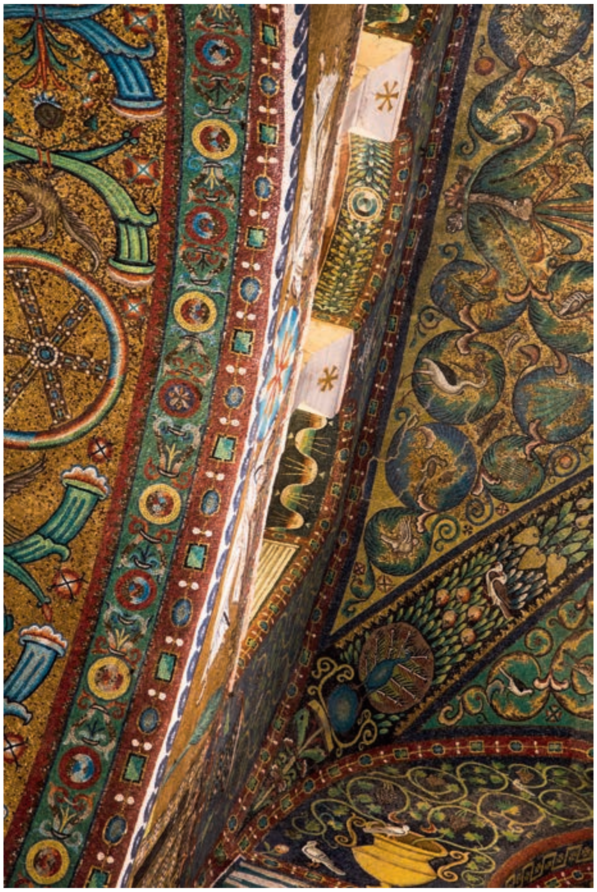


Figure 57 Encrustation and patterned variety: view into the crown of the apse and vaults, S. Vitale, Ravenna, sixth century.

feature in medieval writing about buildings and works of art was that of their size and weight, of how much gold and silver was used, what quantities of precious vestments or marbles were given. The *Liber Pontificalis* is the most obvious, cataloguing papal donations by quantity, pounds of gold and silver, weight of liturgical vessels, numbers of textiles.[21] Other texts are more circumspect, merely detailing the use of precious materials in the fixtures and fittings of a building in such a way as to make it obvious to the audience that a sizeable amount of precious materials was on display – altar cloths of gold, crosses of 'considerable weight', silver lamps, gilded capitals.[22] The most valuable and significant of these rich materials were identified by authors as marbles from across the world, in the form of columns, floors and marble panelling, in part because they could be the most difficult to obtain. The sixth-century author Paul the Silentiary, in his poem on Justinian's Hagia Sophia, devoted a full thirty lines to the marbles of that building in a great set-piece display of virtuoso technique and learning, a feat matched four centuries later by Constantine of Rhodes' self-conscious referencing of this account in his own thirty-line description of the marbles of the Church of the Holy Apostles.[23] It is clear that the most lavish gifts from patrons took the form of columns and marbles (the Empress Eudoxia's gift of thirty-two columns of green marble to her church in Gaza, for example: such a gift would have cost much more than anything else in the church and even if Eudoxia did not have the columns carved from scratch, getting them to Gaza would have been a major undertaking in itself).[24] Next to exotic marbles, gold and silver were a good, perhaps slightly dull and conventional, second. In this context, mosaics appear as valuable and costly as well as aesthetically satisfying only when the tesserae are 'smeared with gold'.[25] It is then that they form a part of a wider image of the overwhelming richness of the church. Time and again, this is the aspect of mosaic commented on: the 'glittering ceilings' of gold mosaic criticised by Jerome and the 'beauty and ostentation' of gold in Justinian's Hagia Sophia; the 'abundant' use of gold creating beauty in the ninth-century church of the monastery of Kauleas in Constantinople and the beauties of the 'golden hall' of S. Cecilia in Rome; the 'resplendent gold' in the palace of Manuel I Komnenos. The effect of all this wealth was one not simply of ostentation and lavish spending, but also of gleaming beauty. The sight and description of these wondrous materials was meant to create awe and amazement on two levels, the impression both of the visual splendour and glittering effect of (gold) mosaic and



Figure 58 Glitter and gleam: the gold mosaic in the pumpkin dome in the parekklesion of the Pammakaristos Church (Fethiye Camii), Istanbul, fourteenth century, directs light down to the image of Christ at the centre.

a sense of the cost visible in the apparent quantity of precious metal needed to cover a dome or an apse (Fig. 58).

Materials had meaning, both in earthly terms – costs and preciousness – and also as an appeal to spiritual values and senses. Few sources mention that mosaics were made of glass for this was not perceived as a particularly precious medium.[26] The colours of glass mosaics are rarely mentioned, subsumed into a generic 'various colours'. The inscriptions associated with mosaics in churches in Rome extol their qualities of brilliance and refulgence and the 'diverse metals' used to create this shimmering light; the colours themselves are seemingly irrelevant to this. Constantine of Rhodes' 230 lines of description of the mosaics of the Holy Apostles never mention their colour.[27] Only very occasionally are specific colours mentioned, often in order to be given symbolic significance. Nikolaos Mesarites, also describing the mosaics of the Holy Apostles, remarked on three colours: Christ Pantokrator's robe of blue and gold, revealing the ostentation of these colours; Christ's grey loincloth in the scene of the Crucifixion, 'sign of suffering and burial'; his red blood visible in the Doubting of Thomas, like the ink used by emperors as 'true confirmation of their commands'.[28]

In contrast, gold, never rusting, decomposing or tarnishing, beaten to the fineness of air, was often used to signify God and the presence of God.[29] Spiritual gold was the moral riches of suffering and martyrdom. In the words of Pope Gregory the Great, 'what is meant by gold which surpasses all other metals but surpassing holiness?'[30] The vast gold backgrounds of mosaics created a sense of



Figure 59 The heavenly city, its walls adorned with jewels and cemented with gold: Bethlehem on the lower left side of the apse of S. Clemente, Rome, twelfth century.

wonder in terms of the amount of gold seemingly used (only the patron and the maker of gold tesserae knew the true cost), and also in terms of the creation of a heavenly sphere against which divine figures played out their roles. Writing in gold served to infuse the very words of mosaic inscriptions with divine presence. The use of gold and of gems made heaven appear a paradisiacal place of spiritual reward. In the *Life of Basil the Younger*, the palaces of heaven are 'spiritually constructed of many-coloured mosaics and variegated marbles'; the ability of glass to take on the appearance of precious stones and its ability to reflect and refract light made it a valuable medium for what it symbolised. In the mosaics of S. Prassede or S. Clemente, the very walls of the heavenly Jerusalem are studded with gems and mortared in gold (Fig. 59).[31] Precious stones were highly valued, in both Christianity and Islam, for themselves and for what they symbolised – paradise for a start. Pearls were costly jewels, but they also carried considerable Christian symbolism. They signified purity but also Christ himself, as the pearl born from the shell of the Virgin, a glowing pearl from an immaculate shell: 'the container whose pearl is more brilliant than the sun'.[32] Mother-of-pearl, when used in mosaics, surely held something of the nature of pearl itself.

In the mosaics of the Great Mosque in Damascus, the use of pearls and mother-of-pearl evoked the dwellings of paradise as well as the luminous imagery of the pearly star referring to God as light: 'God is the Light of the heavens and earth. His light is like a niche within which is a lamp, the lamp enclosed in glass, the glass as if it were a pearly star, lit from a blessed tree.'[33] In Christianity, the saints were compared to precious stones; Christ himself was honoured by being shown in golds and expensive purples.[34] But there was also a tension here: too much gold, and the building could be condemned for its ostentation and earthly showiness: in the words of Jerome writing in the fourth century, though many build churches with marble and gold, 'our Lord by his poverty has consecrated the poverty of his house', a sentiment echoed by Bernard of Clairvaux in the twelfth: 'The walls of the church are aglow, but the poor of the Church go hungry. The stones of the church are covered with gold whilst its children are left naked.'[35] In the Qur'an, the use of gold and silver is not forbidden but believers are warned against their accumulation: those who hoard up gold and silver and do not expend them in the way of God will be punished.[36] In Paradise, on the other hand, believers will be surrounded by gold, silver, silk and other precious materials. Gold, in this perspective, is not cursed: its precious character is acknowledged; the fundamental predicament resides with the amassing of earthly riches. For Christian and Muslim alike, gold was the most precious and purest of all metals: it was therefore fitting to use it to represent the world of the spirit and the divine.

In valuing appearances, it is fair to conclude that medieval spectators were impressed by precious materials and enjoyed the qualities of radiance and luminance that these materials, including mosaic, conveyed. They also saw these qualities of brilliance and preciousness as having significance beyond a simply visual one. However, passages describing or mentioning mosaics are always a part of longer accounts or descriptions of buildings, details helping to create a bigger picture.[37] They need to be understood as one element among several extolling the cost, glory, beauty and sanctity of a building, and they tend to come, especially in Byzantine accounts of buildings, at a specific point within those descriptions to gain maximum 'wow' effect, suggesting that where they were in a building mattered. Many medieval accounts start outside the building and take the auditor or reader inside via the splendid courtyards, imitating the actual experience of walking into a building.[38] This allowed the author to set the stage, presenting the wonder and spectacle of the interior to the audience as they stepped over the threshold into another world: 'When with difficulty one has torn oneself away from [the courtyard] and looked into the church itself, with what joy and trepidation and astonishment is one filled! It is as if one had entered heaven itself . . . and was illuminated by the beauty in all forms shining all around like so many stars . . . it seems that everything is in ecstatic motion and the church itself is circling round.'[39] In this setting, there is no boundary between the physical realm and the spiritual. 'We knew not whether we were in heaven or on earth. For on earth there is no such splendour or such beauty and we are at a loss how to describe it. We only know that God dwells there among men.'[40] Once inside, the audience is treated to descriptions of the architecture and accounts of the precious materials forming the interior decoration and fixtures and fittings of the church, the light effects, and then a narrative (not a description) of the scenes portrayed on the walls. Here, piled together, mosaics, marbles, sculptures, textiles and gilding all form part of an overwhelming visual effect.

There is often a lack of detail about what mosaic was used for in buildings, other than for gilding ceilings. If Hagia Sophia in Constantinople had not survived, the descriptions of the building

would tell us little more than that it contained lots of gold mosaic (all accounts), an image of the Cross (three accounts) replaced by the Pantokrator (one account) in the dome, a representation of the Mother of God and her Child in the apse (one account) and an emperor over the door into the church (one account).[41] In a way, this is unsurprising, for the gold mosaic forms a background to everything else in the interior of the church and it is here that the mosaics come into their own, in the description of visual effects created by the gold, in terms both of light effects and of opulence. What the treatment of mosaic in Hagia Sophia suggests is that there it was appreciated for its stunning visual effect. In contrast, in narratives of scenes, the medium is of much less significance than the event. Indeed, very often a generic verb, 'paint' (γράφω), is used, leaving the modern audience unsure whether that means made 'with pigments' or 'with tesserae'. The twelfth-century account of the making of the mosaic in the church of Hosios David in Thessaloniki never once used the words 'mosaic' or 'mosaicist' but spoke only of 'paint' and 'painter'.[42] In his homily on the image of the Mother of God in the apse of Hagia Sophia, Photios paid so little attention to the medium and the appearance of the actual image as to open the way for scholarly debate about whether the mosaic image there now is the one he talked about.[43] What really mattered in these accounts was what was shown, not the medium in which it was depicted. In contrast, in the *Liber Pontificalis*, which records (among other things) papal donations to the Church, the medium is important, but what was shown in mosaic is not recorded.

But mosaics were good to look at. Medieval accounts of art give us a sense of medieval aesthetics as prizing certain visual qualities in art such as brilliance and glitter, the play of light and dazzling visual effects. The costliness of materials was also greatly esteemed. As a medium, mosaic was valued for the ways in which it matched these standards. On one level, mosaics were a form of very expensive, glitzy, elaborate wallpaper, a golden background evoking heaven and showing off earthly wealth. How far users of a building were attentive to them, especially regular users (familiarity breeds contempt), is unknown. It seems highly likely that for much of the time and for many of their viewers (if that active a term can be employed), mosaics were merely the unobserved but luxurious backdrop to the events being played out in the building, whether liturgy or imperial ritual, public ceremony or private devotion, part of the overall ambience within the building. But if and when viewers did look up and see what was inside the church, in the apse, in the nave, in the chapels, at the images shown in mosaic, then their value as imagery, a value perhaps detached from their medium, came into play.

VALUING MEANINGS

Mosaics were also good to think with and to teach with, for they were used to portray God. This opens up the huge question of the purpose of art in the medieval world, and how it was valued for the messages it conveyed, rather than simply how it appeared. So many medieval mosaics were images set in a religious environment and this context – the relationship between image, God and the believer – was what defined such representations. When a ninth-century Byzantine account of the Church of the Pharos mentioned that the image of Christ on the ceiling was 'painted in coloured mosaic cubes', what it went on to describe was the appearance of the depiction and how that might be interpreted: Christ is a 'man-like figure' overseeing the earth, representing the Creator's, God's, care for humanity.[44]

In Islam, the problem was dealt with simply: images depicting the human form in a religious

context were forbidden. But aniconic mosaics still had a value. Mosaic was valued as a decorative medium for many of the qualities for which it was esteemed in the Christian world: its light-bearing, glinting qualities, and the impression of richness. It was also valued for its associations with the civilisations of the Roman world, being at times identified specifically with Byzantium and used to play out some of the Arab world's engagement with Byzantium. Tenth-century Arab sources describe the sending of mosaic cubes and workmen for the decoration of the Great Mosque in Damascus and the mosque at Medina in the eighth century; when mosaics were added to the Great Mosque in Cordoba, they claimed that these tesserae too came from Byzantium.[45] Whether true or not, these accounts reveal a relationship between the idea of mosaic work, and indeed the medium itself, and Byzantium and a desire to suggest that Arab mosaic triumphed over the Byzantine, that Islamic mosques were at least as beautiful as Christian churches. But the mosaics were also honoured and significant in religious terms. The imagery of the Great Mosque in Damascus, with its scenes of rivers, houses and trees, is not 'simply' a pastoral scene but depicts something of the expression in the Qur'an that 'God shall surely admit those who believe and do righteous deeds into gardens underneath which rivers flow; therein they shall be adorned with bracelets of gold and with pearls, and their apparel there shall be of silk.'[46] The mosaics convey the paradise awaiting the true believer, awaiting population at the end of time.[47] The mosaic inscriptions themselves portray the divine Word embodied by calligraphy.[48]

Christian religious images, which were figural, were less straightforward. Pope Gregory I (the Great) famously described images in churches as books for the illiterate: 'What Scripture is to the educated, images are to the ignorant, who see through them what they must accept; they read in them what they cannot read in books.'[49] Or, as a Byzantine author expressed it, the mosaicking of the interior of the Holy Apostles led to art 'depicting labours and revered images which teach the emptying of the Word and His presence to us mortals'.[50] But such images were never just narratives of Bible stories or uncomplicated scenes of paradise. Rather, their value as messengers came through a purposeful selection of details, making reference through costume and setting, intertextual interpolations, constructed to make stories from long ago and far away relevant to present viewers. What could be read in images was complex and could hold a great many meanings, some contradictory and some only part defined. To look back to the mosaic of the Mother of God from Kiti (above, Fig. 11), this seemingly simple image is a compound of details and potential significances. The mosaic shows Mary as Mother of God, for she holds her Child, and so it says something about the being of Christ, as Incarnate human and yet divine, a deeply important theological issue which will recur throughout Part II of this book. At Kiti, Mary and her Child are attended by angels, heavenly beings given human form, who serve to emphasise the celestial setting of the scene. But the caption above Mary's head says *Hagia Maria*, 'Holy Mary', and that was a comment on Mary as a mortal woman rather than as *Theotokos*, a title she could have been given in the mosaic, meaning literally 'one who gives birth to one who is God', Mother of God. This choice served in its turn to underline Mary's humanity, a twist in emphasis.

The relationship between images, theological text(s) and interpretations has vexed scholars. Was it the case that 'the artist was advised by a learned cleric who tried to make a composition in an apse, the focal point of the church, as meaningful as possible'?[51] Were learned theologians really the brains behind pictures? Or did the image reflect only the demands of the patron? The simple response is that if a particular reading of an image is possible and plausible in the

context of the time, then it is both plausible and possible that an image was understood in this way – hence the multiplicity of interpretations possible for every site and every mosaic. However, how far and how much the finer points of theology influenced the greater part of the audience of an image or whether they made a difference to only small elite sections of that audience is another matter. Christianity was divided and divisive: from early in its history, there were bitter theological disputes and fights over heresies (deviant beliefs, as defined by the winners) and internal conflicts allied to power struggles. Christian unity proved an impossibility throughout the whole Middle Ages. So there is also a question about how far these divisions appeared in and were played out through art. Images were influenced by a whole series of local preoccupations and concerns, above all those of their patrons, and their appearance depended on what artists could achieve, but once made, learned theologians could discuss them in their own particular terms, constructing their own exegeses.[52]

Whatever the mosaic, its value rested on the fact that it was first and foremost a religious and hence a political statement, not an artistic one. From the fourth century on, Christianity increasingly affected everyone in the Mediterranean world, in one way or another and, if Gregory of Nyssa was anything to go by, everyone, no matter how unqualified, had a view on it and was keen to share that view, however dubious and heretical it might be. To paraphrase Gregory in the fourth century, when asking for change in the markets of Constantinople you got a lecture on the Begotten and Unbegotten; when asking the price of bread, you got the response that the Father is greater and the Son inferior; when you asked if the bath was warm enough, you got the definition that the Son is from nothing.[53] For Christians, the very existence of religious images was a matter of considerable debate. Almost from the start of Christianity, images had been used and disseminated. From 312, when Christianity became an 'official' religion of the Roman Empire, the Church as an institution gradually began to allow images in churches. By the mid-fourth century, Christian images had been commissioned by members of the imperial family both publicly and privately, by Constantine himself in the cathedral church of Rome, the Lateran, if not in St Peter's, where the mosaic may well have been the commission of his son, Constantius; by his daughter, Constantina, in her mausoleum in Rome. But such representations were not uniformly acceptable. Those hostile pointed out that Christian images spectacularly contravened the Second Commandment, 'You shall not make a graven image or any likeness of anything that is in heaven above or in the earth beneath or that is in the water under the earth.' As a result, such images were blasphemous because, contrary to God's will, they set up a few bits of glass and stone put together by a man to be worshipped, and that in turn was idolatry, the worship of graven images, which was what pagans did. Moreover, the relationship of the image to its prototype, its original, was problematic. Antagonists to religious images argued that images of God and Christ were false because their divinity could not be portrayed or contained in a human image and so, in omitting this essential aspect, such pictures were neither truthful nor accurate.

The development, growth and struggles over the use of Christian images in Christian churches and Christian worship was an on-going issue throughout the Christian Middle Ages, East and West. This matters for mosaics because it was a continuous background noise; mosaics as (generally) very large and very public religious images embodied much of what those who were for or against such representations of the divine believed, valued, in their very existence. The issue was less of a concern in the West, by and large, where

theological debates about the nature of art and the accurate portrayal of God were of less import than Gregory's dictum about teaching the illiterate, coupled with the use of art to the greater glory of God, creating in imitation of the Creator.[54] Carolingian theology, influential more widely, held that art did not represent Christ's spiritual aspect but could depict his earthly life. Christians recognised that God had ordained sacred buildings, objects and images, most notably the Ark of the Covenant, in the Old Testament, and that this was an answer to the prohibition of the Second Commandment. But this was coupled with a belief that words both allowed and demanded interpretation; this was not the case with images, which simply invited adoration, and hence idolatry. So the potentially seductive nature of art could be dangerous: as the Carolingian theologian Theodulf saw it, images were food for eyes otherwise devoid of spiritual nourishment.[55] Religious art could also lead to inappropriate human displays of luxury and ostentation. Nevertheless, images were a useful, and indeed necessary, instrument of spiritual elevation, which could assist the viewer to achieve a state of contemplation. The cross was a focal point for all Christians as the instrument of Christ's sacrifice and of Christian triumph, and so the mosaic of the Crucifixion at S. Clemente, for example, represented Christ's victory, the vanquishing of evil and the redemption of humanity (amongst other things). The serpent at the foot of the cross, the four rivers of paradise, the acanthus scrolling out of the cross to unite both heaven and earth are all elements underscoring this part of the message. And it is no surprise that it was widely believed that a relic of the True Cross was contained behind the mosaic cross; this gave it an intrinsic value the import of which is lost today, but which was hugely significant in the period.

Western theologians were never quite as troubled as Easterners with questions about whether and how art could portray the divine. In the East, the nature and consequent worth of religious imagery was a strand in major and continuous theological disputes over the nature of Christ's humanity and divinity, a staple of controversy since the time of Christ himself: was Christ fully human, fully divine, both human and divine; were his humanity and divinity separate elements or were they inextricably entwined? In the eighth century, the debate about religious imagery and the question of whether God could be portrayed in art boiled over. The struggle over images, their significance and indeed value, known to us as the period of Iconoclasm was drawn out into the ninth century but ended in victory for those who believed that religious images and their veneration were a central part of Christian practice.[56]

A homily given at the inauguration of the apse mosaic in Hagia Sophia depicting the image of the Mother of God and her Child (Figs. 12 and 13) explains something of the beliefs of both sides in this dispute. This mosaic was the first monumental work of figural art to be installed in the most public church in the Byzantine Empire after the end of Iconoclasm, a very public statement of the victory of the Iconophiles. Underlining the official Triumph of Orthodoxy, the inscription in blue letters on a gold and silver background, running around the base of the apse, says that the image was erected by 'pious emperors', Michael III and Basil I, and the homily celebrating its inauguration was delivered on 29 March 867, under the image itself, by the patriarch Photios.[57] It is, among other things, a statement of just how and why religious images are valid within Christian worship, and so a comment on their value. It sets out to engage its audience with the image of Mary and her Child and to convey to them the theological truths that this image revealed.

> A virgin mother carrying in her pure arms, for the common salvation of our kind, the common

> Creator reclining as an infant – that great and ineffable mystery . . . A virgin mother with both a virgin's and a mother's gaze, dividing in indivisible form her temperament between both capacities yet belittling neither by its incompleteness. With such exactitude has the art of painting, which is a reflection of inspiration from above, set up a lifelike imitation. For she fondly turns her eyes upon her begotten child in the affection of her heart . . . You might think her not incapable of speaking . . . To such an extent have the lips been made flesh by the colours that they appear merely to be pressed together and stilled as in the mysteries, yet their silence is not at all inert neither is the fairness of her form derivatory but rather it is the real archetype.[58]

Photios spoke of Mary, the Virgin Mother, carrying her Child, from the perspective not of aesthetics but of salvation. Although the image is always referred to as being of the Virgin and her Child, it is, of course, of the Child and his Mother. What was important – and what Mary's role was – was to show Christ Incarnate, as born to a mortal, and therefore visible, human and divine. Because God became visible through Jesus, he could be depicted. And painting as a 'reflection of inspiration from above', a reflection of God the Creator, was able to set up an accurate lifelike imitation. In answer to that Iconoclast belief that images could not properly portray the original prototype, Photios emphasised the lifelikeness of the image, that 'you might think her not incapable of speaking'; thus viewers might expect both to see her and to hear her. Her lips have been made flesh; the fairness of her form is not derivatory but the real original; it was as if she were alive. In Byzantine theology, for an image to be a true image it had to resemble the archetype or model; to achieve this, it had to be lifelike. That the image of the Mother of God was 'lifelike', could 'speak', was the 'real archetype', also moved her one step further away from the material world, thereby rebutting Iconoclast claims about the inability of base matter to portray God. That the image might be real would make her flesh and blood and divine, all at once, like the Child she holds.[59] So Photios' homily was about the crucial value of religious images for revealing religious truths; it was about explaining the fundamental paradox of Byzantine religious art that man could depict God truthfully and accurately through base materials. That Mary existed here in Hagia Sophia, in this lifelike form, with the Child on her lap was proof positive of the Incarnation of Christ and hence of the truth of the Christian message.[60]

Further, if an image could portray God accurately, then it was worthy of veneration (not worship) as a representation of God. The significance of such images was that they could help the believer access the divine through meditation and teaching, as Gregory the Great might have said. This was because the Iconophiles argued that sight was the most reliable of the senses and looking at pictures was more reliable than hearing the Gospel. The eighth-century patriarch Nikephoros summed it up when he said that 'Often what the mind has not grasped while listening to speech, sight seizes without risk of error, and has interpreted more clearly.' '[Painting] directly and immediately leads the minds of the viewers to the facts themselves, as if they were present already, and from the first sight and encounter, a clear and perfect knowledge of these is gained.'[61]

Photios' homily was an account of a mosaic image given by a learned cleric but it spoke to the local preoccupations of ninth-century Constantinople. How much of the theology establishing the Iconophile position was accessible or even interesting to a wider population we do not know, but the premise in its crudest form that an image of Christ or Mary stood for, represented, perhaps even was, in some way, Christ or Mary, seems to have been widely accepted as the

fundamental value of the work in Byzantine Christianity.

All of this matters for understanding the value of mosaics because it relates to the meaning of images, to what people thought religious images, including mosaics, were for, and to what they did with them. Certainly all mosaics – all images – in a religious context (and I include Islamic mosaics here also) were valued for the ways in which they could reference humanity's relationship with the divine, helping to establish the cognitive relationship between the earthly and heavenly worlds. Images also established the truth and validity of the Christian message, making it visible to all. Those in favour of images, West and East, argued that the value of religious art lay in its capacity to initiate a procedure of meditation that started with physical sight and ended in inner contemplation, how to 'look at things with the eyes of sense and understand them with the eyes of the spirit'.[62] To explain the image of Mary, Photios needed not to describe it to his audience, but to tell them how to understand it. The image in itself was not mysterious: any Byzantine viewer who could see it would have immediately identified it as the Mother of God and her Child. Photios needed rather to persuade them to see the image not with physical sight but with spiritual, or even conceptual, vision, to look at the apse mosaic not in terms of what was visible but for what their eyes might lead them to comprehend. This is a crucial distinction and it explains much about medieval accounts of religious art in particular: what mattered was less what it looked like than what it meant. Turning corporeal seeing into contemplation of the divine was therefore perhaps the most important aspect of religious art. Both West and East could accept that Christ's humanity served to elevate matter. For both, that God became man and was seen and touched was critically important (though never as theologically developed in the West). The place of the corporeal, human Mary, Christ's mother, in making this point was central, something seen every time Mary was depicted, from Kiti (the Incarnation) to S. Maria Maggiore (the Heavenly Queen with her Son). But it also had to be made explicit that seeing an image of God was not seeing God himself: the image could be revered but could not at any price be worshipped: that was the trap of pagan idolatry.

In terms of valuing meaning, holy images, including mosaics, proved the truth of the Christian message, served as a reminder to the faithful of that tenet, and acted as a locus for contemplation and meditation, a source of comfort and strength, as well as for instruction and elucidation. In contrast to icons, which were generally small and more intimate and personal, mosaics – monumental art – offered this on a large, public scale. They were more than wallpaper; their value rested on their ability to create a sacred space of a church, a model of the cosmos, and a model of the sacred sites of the world, a place within which the rituals of the Christian day and year could be played out, a place where the coherence of sacred history and God's divine plan could be demonstrated. The ways in which specific mosaics were used and where they were located within churches was a part of their meaning. They marked out spaces for religious activity. In a church, the east end and the apse are the holiest parts of the building, closest to the altar where the liturgy is celebrated: in decorative terms, these are the areas of a church that receive the most attention: where mosaic is most likely to be used, for example. In a mosque, similarly, the mihrab arch, especially in the twelfth to fourteenth centuries, was decorated in mosaic because that too was a special area. Beyond the hierarchical positioning, the scenes on apsidal and triumphal arches make bridges from the apse to the historical narratives on nave walls to the liturgical spaces below, potentially relating everything back to the altar space. The apse itself unified the church decoration, joining heaven and earth in the person of the Incarnate Saviour.

Chapels outside the main space could have their own agenda – burial, for example, as in the parekklesia of the Chora Church or the Pammakaristos, or as in the Zeno Chapel in S. Prassede; or political or ecclesiastical statements, as with the various papal chapels, such as the Oratory of John VII, added to St Peter's. Pictures of appropriate subjects linked sanctified spaces to their functions and origins, putting an image of the Baptism of Christ in a baptistery, for example, or a scene of resurrection in a funerary chapel. Images reminded worshippers of what it was all about: the promise of paradise in the Great Mosque of Damascus; the Last Judgement over the west door at Torcello.

VALUING FUNCTIONS

Patrons of religious mosaics (and of religious art more widely) gained additional benefits. Through their generosity and overt demonstration of piety, they had, and were seen to have, God on their side. Individual patrons were often shown in mosaic in the midst of the programme or mentioned in inscriptions or, of course, both. Where and how they were depicted said something about them as important people and about their hopes for the future: images of patrons were there to be noted by the human audience and by God, for whose greater glory the building was built and decorated.

Donors' memorials tend to be large and highly visible: the walls of triumphal arches and apses were good places to make public statements. Subtly and unsubtly, they were there to grab the attention of the church audiences and to ensure that the patron was both remembered and prayed for. The inscription in Bishop Theodulf's apse at Germigny-des-Prés asked those looking at it to 'include Theodulf's name in your invocations'. For their money, patrons, whether imperial, ecclesiastical or simply wealthy, got themselves inscribed, whether through images or words, onto the fabric of the church and into the presence of God. Such inscriptions could range from the apparently humble prayer of an anonymous woman in Thessaloniki who dedicated the mosaic apse of Hosios David as a gift from 'her whose name is known only to God' to the grand – Pope Sixtus III in S. Maria Maggiore who dedicated the church and its mosaics as from himself to the people of God, or Bishop Maximian in S. Vitale who made his presence felt as the only named figure in the mosaic panel, carefully arranged to stand with his shoulders and upper body humbly behind the emperor and his feet in front.

Patrons often were depicted in the presence of Christ and his Mother: this gave them the appearance of salvation and made an assertion of their hoped-for place before God. Pope Paschal I had himself depicted time and again in the apse mosaics he commissioned in Rome: at the feet of the enthroned Virgin and Child in S. Maria in Domnica; standing modestly to the left of the titular saint in S. Prassede; and at S. Cecilia set in proximity to Christ and echoing the earlier image of Pope Felix IV in the apse of SS. Cosmas and Damian. Not only that, Paschal also made sure his monogram featured at the crown of the apse in each church and had himself included in the inscriptions below each mosaic. In each case, Paschal appeared as one of the congregation of the holy, interceding for his people before Christ, blessed and approved by Christ. By placing himself with the saints, he showed himself as one who could intercede for the congregation in the same way as the already sanctified. When he appeared in the church itself to celebrate the liturgy, his human person would stand or sit below these images, mosaic made flesh. In the Chora Church in Constantinople, the patron, Theodore Metochites, had himself pictured (dressed in his best clothes and very stylish hat) over the door between the inner

narthex and the nave, humbly kneeling and presenting his church to Christ. This seemingly modest gesture was actually very much the reverse, for it almost certainly consciously echoed the pose of the emperor above the west door between narthex and nave in Hagia Sophia and placed Theodore unmissably and forever present in his church in the company of Christ. In whatever way, the patron always made sure he or she was eternally there in the building, perpetually in the presence of Christ, the saints and the saved, the picture being parent to the wish. In this way, the mosaics, indeed the whole fabric of the church, were an offering to God, an elaborate prayer for salvation and eternal life. The importance of salvation and the avoidance of damnation was a matter of consuming importance to Christians, and religious art was a form of investment for the forgiveness of sins.[63]

On a more human level, patrons also used mosaic to demonstrate their own and their family's social standing. For a start, mosaics said a great deal about their resources and their status as rich and (probably) aristocratic individuals. Patrons were pious, virtuous, charitable and publicly well worthy to be in the presence of God (at least, that was the claim of these images). But every time a patron was depicted in a mosaic, it asserted his or her earthly place – and that was never a lowly one. Women in particular could express things through images that could never have been otherwise said. Galla Placidia used her mosaics in Rome and Ravenna to underline her imperial status and connections to Constantinople, useful political points in fifth-century Italy. At St Polyeuktos in Constantinople, Anicia Juliana made sure that the images (probably mosaic) in the church showed off her dynastic association with Constantine the Great, scoring points off the upstart emperors of the day.[64] In his Church of the Chora, the nouveau riche aristocrat Theodore Metochites showed himself in the same sort of penitent pose as an emperor. Putting up a mosaic always spoke of patrons' resources and power; it always addressed his or their standing and it always related to his or their faith.

THE FUNCTION OF MOSAICS AND THE 'CLASSICAL SYSTEM' OF MIDDLE BYZANTINE CHURCH DECORATION

The question of how (and indeed whether) mosaics and indeed church decoration more widely had a value and a function as an organised and systematised scheme has been around ever since Otto Demus created one. He used the mosaics of three eleventh-century churches in Greece, Hosios Loukas, Nea Moni and Daphni, as the basis to explain the ways in which images were used on church walls after Iconoclasm, a blueprint which ever since has been widely employed.[65] As Demus rightly pointed out, Byzantine monumental mosaics were created in relation to their architectural frameworks and their beholders (Fig. 60). When a church was decorated, the holiest images of the divine Christ and his Holy Mother were located in the highest and most sanctified places – the central dome, the apse – because these were the most sacred representations. These images Demus referred to as 'dogmatic' images. Below these, at the next level came narrative scenes from the life of Christ, his mission on earth, described by Demus as a Feast or Festival Cycle, representing the twelve great liturgical feasts of the Christian (or Orthodox) Church. These tended to be below the domes and in the upper reaches of the walls. Finally, at the lowest level and in the least holy parts of the church, the lower vaults, lower walls, the west end, are the individual images of saints and holy people, placed as a 'sanctoral cycle'. These saints were arranged according to their rank, function and place in the liturgical calendar: Prophets and Church Fathers tended to be grouped at the east end of



Figure 60 Interior of Hosios Loukas, Phokis, showing the three levels of the so-called 'classic' decoration scheme of the Middle Byzantine church.

a church; sets of martyrs, warriors, healers put together in the middle; monks, and women especially, located as far west as possible. Demus' central point was that the separate scenes and the three bands, dogmatic, feasts and sanctoral, worked together to form a single, almost indivisible, whole, which conveyed fairly broad Christian dogma to those in the church. He saw this arrangement as a dominant formula that could be dated to the late tenth and eleventh centuries (a slightly circular argument since it was made on the basis of surviving tenth- and eleventh-century examples) that replaced a previous flexibility in the positioning of scenes visible in churches from the fourth century on.

Demus' descriptions of these patterns of distribution and his assessment of the decoration as working in two directions, east to west and high to low, are an important tool in understanding the significance of an image's location within a church. But his model has become fossilised into a system, the 'classical' Middle Byzantine church decoration, into which scholarly analysis has taken the question of how far a church's decoration fits the system as a starting point. It is an attitude that implies not only that there was some sort of standard norm in church decoration but also that standardisation was a goal in the decoration of Middle Byzantine churches and churches influenced by Byzantium.

There is little evidence to suggest that this was so: of the many Middle Byzantine churches known, both painted and mosaicked, only one really matches the paradigm. Even in the three churches analysed by Demus, Hosios Loukas, Daphni and Nea Moni, the mosaics are as varied as they are similar, from different iconographies (a standing Mother of God in the apse at Nea Moni; a Mary and Child at Hosios Loukas) to different dispositions and choices of characters within scenes, to different scenes altogether (which scenes from the life of Christ and where they are located in the churches). Nor do the ideas of a 'festival' and a sanctoral cycle really work: again, the disposition of scenes at the three Greek churches is not as consistent as the concept

would like. At Nea Moni, the octagonal dome allowed eight scenes from the life of Christ in the nave to function as a 'cycle', if that was how they were perceived; but at Hosios Loukas, only four such scenes appear in the nave and the rest appear in the narthex; and at Daphni, there are four in the nave and but eight more in the north and south cross arms and three in the narthex. And the Crucifixion – a scene one might imagine as central both to Christ's life and in the Christian calendar – is shown in the naos only at Nea Moni. It is tucked away below the Birth of Mary in the north aisle at Daphni, and at Hosios Loukas it is in the narthex. It is also worth noting that there is no definitive, canonical rule about 'twelve major feasts' in Orthodox Christian worship, but instead, numerous feasts, all important in the liturgical year.[66] As for the saints, there is an enormous variety in who is pictured in what church. Of the ninety saints surviving at Hosios Loukas, twenty-eight at Nea Moni and twenty-nine at Daphni, only two are found in all three churches: Auxentios, a fourth-century martyr, and Stephen, the deacon and first martyr. Hosios Loukas has nine saints in common with Nea Moni and eleven with Daphni; Daphni and Nea Moni have six saints in common.[67] Nor do the saints actually appear to be grouped by their place in the liturgical calendar.[68] At Hosios Loukas, the warrior saint Theodore Tiro appears in the diakonikon, a space reserved in Demus' schema for churchmen, priests, bishops and deacons. Rather than a calendar, the range and choices of saints within churches must have had specific resonances for patrons and local users alike, reflecting the nature of the church (whether monastery, nunnery, burial place or commemorative) and the concerns of the patron: the use of name saints, for example; local concerns; reflections on the function of the church – a very large number of monks and local saints are depicted in the monastery church at Hosios Loukas. The use and choice of specific images – what in the dome, what scenes of Christ's life and which saints – seems as much church-specific as fitted to a universal conception of church decoration. At Daphni, for example, more emphasis in the surviving mosaics is placed on the life of the Mother of God than in the other two churches, one of the reasons why it has been suggested that the church was dedicated to Mary.

These three churches provide a good demonstration of the fact that, although on one level Byzantine art is 'all the same' (and there were good theological reasons for that), nevertheless patrons and artists could make changes and make their programme distinctive and indeed potentially relevant to the specific church. For example, the scene of the Anastasis, the descent of Christ into Hades, the underworld, to save the righteous dead, is found in all three churches. At Hosios Loukas, the mosaic depicts Christ with Adam, Eve, and the kings David and Solomon to either side, all silhouetted against a stark gold background. At Nea Moni, perhaps eleven others join in waiting for salvation and the scene is outlined against a mountainous background; unlike the other two scenes, it is located in a curved squinch and gains dramatic impetus from this. At Daphni, the four stand together and eleven more wait for help, as Christ steps delicately on a prone and bound figure representing Hades himself. Though they are all 'the Anastasis', it is impossible to mistake one scene for another.

In other words, though there were certainly some general conceptual similarities (since they are all Orthodox churches, this is unsurprising) in the distribution of type of scene, a programme was surely designed for each church, presumably to fit the patron's requirements and the function of the church. And, to return to an earlier theme of this chapter, it is in the context of spiritual need that we should see mosaics as having another level of value. Demus saw his three levels of decreasing holiness in the decoration as a way of schematising the church as a model of the

cosmos, the whole world, conveying the actual places where the events of Christ's life on earth had taken place, and thus creating a symbolic pilgrimage to the Holy Land.[69] The decoration was also related to the celebration of the liturgy. However, he tended to see the images themselves as unemotional and dogmatic, an official hieratic art that did not aim to evoke the emotions of pity, fear or hope; any such appeal, he thought, would have been felt as all too human and out of tune with the tenor of religious assurance which pervades the ensembles and would leave no room for spiritual or moral problems.[70] In contrast to the West, where emphasis was placed on the moralistic and didactic elements of religious images, in Byzantium, for Demus, the images appealed to the beholder not as an individual with a soul to be saved but as a member of the church with his (or her) own assigned place in the hierarchical organisation. But the idea that religious images, even monumental ones, were hieratic and detached from human emotions, is now felt to be unappealing and a greater emphasis is placed on the emotive aspect of religious imagery.

When Thomas Mathews revisited Demus' discussion, he made a convincing case that the value of images in a church was as part of an intense, emotional and personal religious experience.[71] On an individual level, worshippers, on entering the church, could communicate with the saints who were close to their level. They could touch, kiss, cense and physically venerate these images (which did, after all, represent the actual holy person depicted). At one level, these standing figures were part of the liturgy: the worshipper was in church with the saints. And it was appropriate that there should be local references for these were the saints of people's everyday lives, the focus of communal prayer.[72] Indeed, saints performed different roles within churches. They might be memorialised there, as with the mosaic panel depicting St Demetrios in his own church in Thessaloniki. Their relics might be there: the church of S. Prassede, for example, served as a great jewelled reliquary, the mosaic decoration underlining the presence of the saintly remains contained in the church's crypt. They might join in the liturgy, perhaps processing within the building as at S. Apollinare Nuovo, or forming a congregation of the holy, ever-present in the liturgy and adding their weight to the prayers of the congregation, as at the Rotunda in Thessaloniki or at Hosios Loukas. Saints served as exemplars of the Christian lifestyle, role models for salvation and sources of help and comfort. Their images and their relics could work miracles. The patron saint of the church was almost always portrayed there, but the range of saints shown within a church was also significant – local saints, types of saints – monastic and ascetic in monastery churches, for example Peter and Paul in Rome, Hosios Loukas in his own church.

Above these, often higher on the walls or in the squinches of the dome, the scenes from the life of Christ could be arranged in several ways. They were located at a remove and so were perhaps not so much for physical veneration as to keep the reality of Christ's Incarnation, life and death, his mission of salvation, his miraculous powers, alive and in the mind of the worshipper. There above them he was, visibly represented as dying for them, rising from the dead. These scenes related to the cycle of the Christian Church, to the liturgy itself; they could act as a commentary – an exegesis – on the Bible stories read in church. They might remind the worshipper of the Holy Land itself, they might create a sense of the church as holy land and they might serve as a vehicle for teaching. All of these things were possible and we should not assume that only one message was taken by the worshipper. And we know that viewers could respond emotionally to such pictures, weeping in front of images of the Crucifixion for example, because of texts that give this audience response. In the phrase of Constantine of Rhodes, 'who would not be

moved' by a scene of the Crucifixion?[73] The location of these scenes within the church on the horizontal axis was also significant: it was not by chance that scenes of Pentecost often appear in the sanctuary or scenes of the Last Judgement on the west wall. New scenes and details came into church decoration, probably more often than we realise: the Communion of the Apostles from perhaps the eleventh century, perhaps a reflection of theological disputes about the Eucharist and Christ as High Priest; the Man of Sorrows; the lamenting Virgin at the Crucifixion. There is no need to interpret these scenes simply as a 'Feast Cycle' related to twelve feasts; rather these are temporal scenes from the life of Christ that reflect the timeless liturgical year of the church and were also reflected in the daily celebration of the liturgy, the fundamental function of the church. Each scene is both complete in itself and also occupies a place in a bigger picture of Christ's life and teaching. And, as with saints, individual churches appear to have tweaked the scenes to fit their purpose and space. At Nea Moni, for example, eight scenes are in the nave and four more in the rest of the church. The scene of the Washing of Feet is included at a place in the narthex where it is conceivable that the monks washed feet on the Thursday of Holy Week.[74] In St Sophia in Kiev, the Communion of the Apostles is shown in the apse, behind the altar where the actual ceremony took place.

Inscriptions too could become imbued with divinity. As the Gospel of John said, it was the Word that was made Flesh. For those with the skills to do so, letters and words too were there to be meditated on and contemplated, in both Christian and Islamic mosaics.[75] Texts for the literate worked on a variety of levels, of which reading them was only the start. References – biblical and otherwise – could be teased out; patronage observed; responses made; prayers said aloud. For the illiterate, the text was perhaps more a magical device, another form of ornament, a part of the whole visual effect of the building, where perhaps certain key words could be deciphered and venerated, or stories told about what the words 'really' said.

Finally, there is the image of Christ in the central dome, often shown as Christ Pantokrator, or Ruler of All: half-length, appearing to look out from heaven, blessing his people but keeping an eye on them at the same time. The image in the dome and that in the apse denoted sacred space. Below the dome, beneath Christ, worshippers congregated for the liturgy and for intimacy with Christ and his Mother. As Mathews put it: 'One did not enter this space to work out puzzles in iconography but to be transformed or transported' through worship and the celebration of the liturgy.[76] The liturgy was the 'social glue' that held Christian communities together, worship a central element of faith and society, images an intrinsic part of that experience.[77] So images, whether made in mosaic or paint, on walls and ceilings were valued for the ways in which they made visible the divine and sanctified the corporeal.[78]

One of the problems with the idea of a 'programme' is that it leads to debates framed almost exclusively in those terms. It seems highly improbable that church decoration was esteemed in the medieval world for its fidelity to such a scheme and yet many of the debates about how and why churches were filled with religious images are hung around the temporal 'development' of monumental wall decoration. Demus called his system 'Middle Byzantine', suggesting that it had developed into this mature form after Iconoclasm, when there were no longer any restrictions on religious imagery, and that it was also designed very much for the centrally planned church that was so much a feature of Middle Byzantine church architecture. He proposed that, before Iconoclasm, church decoration was more haphazard, random and flexible. At St Demetrios in

Thessaloniki, for example, there was no governing programme, just a string of individual dedicatory images.[79] The growth of a homogeneous programme in which the different units related to each other systematically was, for Demus, a development from the late ninth century on, reaching its peak in the eleventh century, and coming to an end in the late twelfth century, perhaps with the destruction of the empire in 1204. It came from Constantinople, where it was used in its most perfect form (where in Constantinople is actually unknown, since no cycles of mosaics survive from the city), and deviations from the Constantinopolitan ideal were labelled 'provincial'. So, after Iconoclasm, the use of a scene of Christ's Ascension in the dome of a church, as happened at Hagia Sophia in Thessaloniki, rather than the Pantokrator was a sign of provincialism rather than flexibility, as was the presence of Christ, rather than the Mother of God, in the apse (for example in S. Marco in Venice), a survival from the days before Iconoclasm.[80]

However, although the presence of Christ in the dome rather than in the apse is a major difference in Byzantine mosaics pre- and post-Iconoclasm, this reflects a change in church architecture as much as anything, a movement in the Byzantine Empire away from rectangular basilicas towards centrally planned domed churches. One of the great debates in Byzantine architectural history has been about when this shift took place, for the development and typography of the centrally planned church was not a sudden empire-wide movement, nor did it happen in a straightforward and linear fashion. There were domed churches before Iconoclasm (the two Hagia Sophias of Constantinople and Thessaloniki, Hagia Eirene in Constantinople, S. Stefano in Rome, even S. Vitale in Ravenna) and they may well have had images in their domes; and there were basilica churches built and in use after Iconoclasm. As a supposed 'Byzantine' system, in this case with 'Byzantine' referring to Orthodox Christianity, the concept of a 'mosaic programme' also presents difficulties when applied to imagery from, say, Rome or Sicily. The ninth-century mosaics of the Zeno Chapel of S. Prassede in Rome have been labelled as 'proto-Byzantine' on the basis that their arrangement was an early version of the classic formulation, and so explained in terms of something from their future in Byzantium, rather than in reference to what was going on around them in Rome and what their papal patron wanted from them; similarly, the mosaics of S. Marco in Venice and the twelfth-century mosaics from Norman Sicily have been discussed in relation to the presumed Byzantine 'norm'.[81] That these mosaics have also been interpreted as the work of 'Byzantine' mosaicists (in the case of the Zeno Chapel, under the patronage of a 'Greek' pope) merely closes the vicious circle, encouraging us to look to Byzantium for the answers rather than to consider these mosaics in their own terms.

As Part II will go on to demonstrate, the development of church decoration was both less haphazard and more flexible than Demus allowed for. Apses were decorated in a multitude of ways from the fourth century on. In Rome, by the fifth century, at St Peter's and S. Paolo *fuori le mura*, the major image was located in the apse, whilst there were scenes of Christ's life along the walls, and presumably saints also. That was certainly true at S. Apollinare Nuovo in Ravenna. At St Demetrios, it is not really fair to say that the mosaics did not have a 'governing programme'; it is quite clear that they shared a theme designed to uphold the local saint and his miraculous powers. What we do not know at St Demetrios is what other scenes were used in the church in key areas along the nave and in the apse. Enough material survives to suggest the existence of New Testament pictorial cycles well before the ninth century: the Iconoclast Emperor Constantine V (741–75) is reported as having images depicting

the life of Christ in the Church of the Mother of God at Blachernae destroyed and replaced with trees and animals: this sounds like a potential pre-Iconoclastic life cycle of Christ.[82] The *Letter of the Three Patriarchs*, allegedly of 836, claimed an apostolic origin for New Testament picture cycles that is probably unjustified, but such an assertion indicates that such cycles were already well established.[83] That the New Testament cycle in the Constantinopolitan church of the Holy Apostles is usually seen as ninth century owes much to the idea of the 'Middle Byzantine' programme: it could as well be sixth century or the restoration of a sixth-century cycle. In the Zeno Chapel, the images labelled as 'Byzantine' (notably a scene of the Anastasis) have as much to do with Rome as with Constantinople, and their organisation is not unique to this Western example. And even from the fourth century, it seems improbable that biblical and Christian scenes were divorced from any liturgical meaning or significance, or from any assertion of Christian truths.

Given the very limited nature of the surviving evidence (the mosaics still on walls), it is very hard to create a generalised model of church decoration before or after Iconoclasm, East or West. Mosaic was used in so many places in a variety of different churches that imposing a standard pattern at any time seems unhelpful. So too does creating an image of Constantinople as an authoritarian centre from which ideas about 'correct' decoration and the best artists came.[84] Art was produced in so many places across the Mediterranean world that the idea of a post-Iconoclast fervour (almost puritanical, if that were not a contradiction in terms) for a single form of decoration looks unlikely. This is particularly the case before the ninth century, when so much of the material comes from Italy, and we have almost no idea of how churches in Constantinople were decorated. It has led to a situation in which a model of the development for church decoration before Iconoclasm is based on the evidence from a set of monuments labelled as 'provincial' yet perceived as 'typically Byzantine'. In fact, there is enough material from the fourth to the seventh century to suggest that images in churches were organised hierarchically and spatially in a very similar way to how they were organised after Iconoclasm. So it is not easy to construct a 'development' of church mosaic art, and it is misleading to try.

I have spent so much time on this point because it seems to me that something of the value of monumental religious imagery such as mosaic to its medieval audience was in its ability to be flexible in conveying an awareness, an impression of the divine; that within the constraints of making the divine recognisable and apprehendable to its audiences, religious imagery could be endlessly pluralistic. The concepts behind Demus' Middle Byzantine schema, that the decoration of churches had certain recurrent purposes (expressing theology, expressing heaven on earth, establishing a relationship between the world of the beholder and the world of the image, hierarchising holiness), are essential, but the idea of a shift from a flexible form of church decoration in the fourth to ninth centuries to a more rigid system (and would we therefore assume rigidly enforced, and, if so, by whom?) in the late tenth to twelfth centuries seems less credible and even unnecessary. What survives is a fuller set of mosaics from more churches in the eleventh century in which the similarities have been privileged ahead of the differences. For other periods, the numbers are lacking. What we need to understand with church programmes is that their development is unlikely to have been comfortably sequential or uniform. There are likely to be areas of similarity because churches all served comparable roles, but there will be differences at local level, for each church had its own particular part to play, its own set of values to propose. There were clearly developments and

changes in iconography, in what was favoured, in what were the important theological points to get across: surviving material suggests that the image used in apses varied considerably until perhaps the ninth or tenth century when the presence of the Mother of God in Byzantine art reflects a statement about the Incarnation of Christ that was popular, but not necessarily universal. But it also needs to be noted that she was not depicted with the same regularity in the apses of Western churches, where the theological struggles of the Byzantines played out in Iconoclasm were not quite the same. Imagery was adaptable to local need, and this is a theme that will recur throughout the second part of this book.

One thing apparent in this chapter and in the discussions of Chapters 2 and 3 is that it is impossible to say what role, if any, the patron played in the design of the mosaic, what was specified and how and to whom it was communicated. We can only assume that what the mosaic looked like reflected in some way and on some level what its patron wanted. We might see this as affecting every last detail; we might see it as having broader, more general messages, perhaps about fame or display or prestige or power or spiritual advantage, or all of these at once. These are the themes of the discussion that will run through the second section of this book. East or West, Christian or Muslim, religious images, whether made in mosaic or paint, on walls and ceilings, were valued for the ways in which they made the divine visible. But mosaic, unlike paint, brought with it the qualities of light, brilliance, colour and dynamism that were embedded in the divine, and were themselves valued for what they were and what they stood for. Whether East or West, Christian or Muslim, a mosaic was never valued simply for being a mosaic. In giving a mosaic, or any sort of gift, ecclesiastical or secular, the donor aimed for some return: at the very least, honour and commemoration on earth and salvation in heaven. Cost and value must have all been interlocking issues for the patron, but they are almost impossible to disentangle now, related as they may be to quality and definitions of quality. Some mosaics that have been described as less than successful are nevertheless large, made with rich materials, gold especially, and shimmer and reflect light wonderfully, all qualities that were valued in a mosaic in the Middle Ages. It is the broader question of why patrons chose mosaic to decorate a building, what it stood for in both earthly and heavenly terms, and what they may have gained from it, that form central themes of the second half of this book.

Part II

MOSAICS BY CENTURY

INTRODUCTION TO PART II

PART II OF THIS book shifts from the general to the particular. Having considered how mosaics may have been made, I turn to look at where and when this happened and to suggest some reasons why. This section of the book is ordered by century and so progresses in a linear fashion from the fourth to the fourteenth century. This is a structure that presents its own problems, foremost that of having to decide into which century to place every mosaic. However, because I wanted to explore the distribution of mosaics across the medieval world and to consider mosaics in Constantinople alongside those in Rome or Damascus, this seemed the best way to organise the material.

'Where' is a relatively straightforward element since, by and large, wall mosaics survive in situ, either on the wall or in pieces on the floor, or their original location is well established (as with the panel from the Oratory of Pope John VII now in the Church of S. Maria in Cosmedin). There are a few exceptions to this. For example, a single panel showing St Sebastian now in the church of St Peter *in Vinculi* in Rome is not in its original location and we have no idea of where that was, other than that it was probably in Rome. However, what I have sought to do with 'where' is bring together medieval mosaics and record and map their distribution by century. These maps open the way to seeing mosaics in a wide Mediterranean context and, as we shall see, throw up some interesting distribution patterns over the centuries.

'When' is problematic, since it involves placing a mosaic in a particular century and so giving it what looks like a firm date. Of surviving wall mosaics, some can be dated with relative certainty to a specific period – the reign of a pope, for example – through the image shown (a portrait of the donor, usually put up by

said individual), through inscriptions on the mosaic contemporary with it, or through written sources. Others are dated by association, through the presumption that they were put in place at the same time as the building was constructed. We cannot automatically assume that this was invariably the case, however: at Livadia on Cyprus, the building may be twelfth century but the mosaic is said to be earlier; at S. Marco in Venice, mosaics have been installed and repaired throughout the history of the building; at S. Maria Maggiore in Rome, the apse mosaic postdates the building by eight centuries. Finally, many mosaics are dated through analysis of their style and their iconography, and this is the most contentious, leading to wide differences. The mosaics of the Rotunda in Thessaloniki, for one, have been dated to anywhere from the fourth to the eighth centuries. All dating methods offer some scope for confusion and inaccuracy and so dating is most reliable when a combination can be employed. Even then, however, this can lead to no more firm a dating than to a particular century.

Of the 380 or more mosaics still on the wall that are mentioned in this book, less than half have some form of agreed date, whether that is as specific as a year or as broad as a single century. Table 6 lists those examples of surviving mosaics where I think that the dating is possibly most secure, bold indicating the most likely and italics those where the evidence for date is more tendentious.

The table aims to highlight those mosaics where a definitive date seems acceptable. But what it also shows is that several well-known mosaics are conspicuous by their absence because they are not conclusively dated. These include the Rotunda in Thessaloniki, S. Pudenziana in Rome (perhaps fourth or perhaps fifth century), the narthex and vestibule panels in Hagia Sophia in Constantinople (which may be ninth or tenth century), the three Cypriot mosaics of the Mother of God at Lythrankomi, Kiti and Livadia, and the mosaics at Daphni. At S. Marco in Venice, the mosaics were installed over a period from the construction of the current church in the eleventh century to more or less the present (if repairs are included) and disentangling them one from another is an awful task, founded on the detailed analysis of style and iconography.

Using style and iconography to date a mosaic is problematic for a variety of reasons. First, I do not believe that we understand enough about techniques of mosaic-making to really be sure what the differences in the appearances of mosaics tell us. Second, style too often becomes a circular tool. If a mosaic is dated to a century on comparison with the style of other mosaics also dated by style, as is often the case, then the whole edifice is based on a rocky foundation. In the case of the eleventh-century mosaics at Daphni for example, these are dated on the basis of the dating of the church (done through stylistic analysis of the architecture) in the first instance and hence the presumption of the two being constructed contemporaneously. Then comparisons with other mosaics from the same presumed time period are employed to enable a closer dating. This has led to the Daphni mosaics being located at different points in the eleventh and even twelfth centuries, depending on the reading of their association with other eleventh-century mosaics and works of art. This argument also depends, to an extent, on an implicit assumption that 'mosaic gets better': if the Daphni mosaics, notably the awesome Pantokrator in the dome, are perceived as examples of high-quality mosaic work and 'better' than those at say Hosios Loukas, then they are said to be later.[1] Iconography can be used in the same way. The three churches with mosaics still in situ on Cyprus, Lythrankomi, Kiti and Livadia, are dated in part through their depictions of the Mother of God: the argument is that they must be sixth century or later because this is when such

Table 6 Surviving mosaics: relatively secure dates

Mosaic	Dates Associated	Evidence
Church of St Felix, Cimitile (Nola)	*395–431; 484–523*	*Some mosaics may be contemporary with building of* aedicola *by Bishop Paulinus who was at Nola between 395 and 431; some may be later*
S. Sabina, Rome	**422–40**	**Presumed contemporary with building of church by Peter under Pope Celestine I (422–32) or Pope Sixtus III (432–40)**
'Mausoleum' of Galla Placidia, Ravenna	*417–21; after 425*	*Attached to Galla Placidia's church of S. Croce*
S. Maria Maggiore nave and triumphal arch, Rome	**432–40**	**Likely to be patronage of Sixtus III (432–40) – his name is on the inscription on the mosaic of the triumphal arch**
S. Giovanni (Lateran Baptistery), Rome	*432–40*	*If the work of Sixtus III* – see the LP
Orthodox Baptistery, Ravenna	**450–73**	**Presumed contemporary with building of church by Bishop Neon (450–73)**
St John Evangelist (Lateran Baptistery), Rome	**461–8**	**Likely patronage of Pope Hilarius (461–8), according to *LP***
Arian Baptistery, Ravenna	**493–526**	**Presumed contemporary with building of church under patronage of King Theoderic (493–526)**
S. Apollinare Nuovo, Ravenna (some)	**493–526**	**Presumed contemporary with building of church under patronage of Theoderic**
Archbishop's Chapel, Ravenna	**494–520**	**Work of Bishop Peter II (494–520)**
Mar Gabriel, Kartmin	**Founded 491–518**	**Presumed contemporary with patronage of Anastasios I (491–518); 512 is a date associated with Anastasios sending workmen**
S. Vitale, Ravenna	**522–32; 546–57**	**Built by Bishop Ecclesius (522–32); Bishop Maximian (546–57) pictured and named in the decoration**
SS. Cosmas and Damian, Rome	**526–30**	**Associated with Pope Felix IV (526–30) as patron**
Eufrasian Basilica, Poreč	**540s–60s**	**Associated with one Eufrasius who may have been the bishop in 550s/60s**
S. Apollinare in Classe, Ravenna	**By 549**	**Consecrated in 549 by Bishop Maximian**
H. Sophia, Constantinople, ornamental	**Between 532 and 562**	**Contemporary with rebuilding and/or re-rebuilding of church by Justinian I after the *Nika* riots**
St Catherine's, Mount Sinai	**Between 548 and 565**	**Presumed contemporary with foundation of monastery by Justinian I**
S. Apollinare Nuovo, Ravenna (replacement mosaics)	**557–70**	**Work of Bishop Agnellus (557–70)**
Kalenderhane Camii, Constantinople, presentation panel	**565–78**	**Dated via archaeological and numismatic evidence to building of the church and the reign of Justin II**
S. Lorenzo *fuori le mura*, Rome	***c.* 579**	**Associated with remodelling of Pope Pelagius (579–90)**
St Demetrios, Thessaloniki	*After 620*	*After major fire of 620; style; association with texts*
S. Agnese *fuori le mura*, Rome	**625–38**	**Church restored by Pope Honorius I (625–38), presumed responsible for the mosaics**
S. Venanzio (Lateran Baptistery), Rome	**640–9**	**Presumed contemporary with building of chapel under patronage of Pope John IV (640–2); finished by Pope Theodore I (642–9)**
S. Stefano, Rotondo, Rome	**642–9**	**Presumed contemporary with rebuilding of church under patronage of Pope Theodore I (642–9)**
S. Apollinare in Classe, Ravenna ('Privileges' panel)	*Panels: 671–7*	*Work of Bishop Reparatus (671–7)?*
Dome of the Rock, Jerusalem	**?684/5–?691/2**	**Patronage of Abd al-Malik**

Table 6 (cont.)

Mosaic	Dates Associated	Evidence
Oratory of John VII, Old St Peter's, Rome	**705–7**	**Oratory built and presumably decorated by Pope John VII (702–7)**
Great Mosque, Damascus	**706–15**	**Patronage of al-Walid**
H. Eirene, Constantinople	**Between 740 and 775**	**Said to have been put up by Iconoclast emperor, Constantine V (741–75) after the earthquake of 740**
Small *Sekreton*, H. Sophia, Constantinople	**741–75**	**Believed to have been put up by Iconoclast emperor, Constantine V (741–75)**
H. Sophia, Thessaloniki, bema vault	**780–97**	**Monograms of Constantine and Eirene (joint rulers 780–97), plus name of Theophilos (bishop 780–8)**
Germigny-des-Prés, Orléans	**After 801**	**Built and presumably decorated by Theodulf whilst Bishop of Orléans (*c.* 798–818)**
S. Prassede and the Zeno Chapel, Rome	**817–24**	**Presumed contemporary with building of church under patronage of Pope Paschal I (817–24); Paschal's monogram and image central to mosaics**
S. Maria in Domnica, Rome	**817–24**	**Presumed contemporary with building of church under patronage of Pope Paschal I (817–24); Paschal's monogram and image central to mosaics**
S. Cecilia, Rome	**817–24**	**Presumed contemporary with building of church under patronage of Pope Paschal I (817–24); Paschal's monogram and image central to mosaics**
S. Marco, Rome	**829–31**	**Rebuilt by Gregory IV (827–44); includes him and his monogram**
H. Sophia, Constantinople, patriarchal rooms	*847–70*	*Circumstantial evidence: style, epigraphy, iconography*
H. Sophia, Constantinople, apse	**866–7**	**Inauguration homily delivered 867 by Patriarch Photios; fragmentary mosaic inscription accepted as addressed to emperors Michael and Basil (866–7)**
H. Sophia, Constantinople, tympana saints	*880–900*	*Circumstantial evidence: style, epigraphy, iconography*
H. Sophia, Constantinople, Alexander panel	**912–13**	**Presumably installed by Emperor Alexander (912–13)**
Cordoba, Great Mosque	**961–76**	**Presumed part of expansion of al-Hakam (961–76)**
H. Loukas, Phokis	**1011–22 or 1040s–50s**	**Contemporary with foundation of the church (the date of which is disputed)**
H. Sophia, Constantinople, Zoe panel	**1028–55**	**If contemporary with the imperial figures depicted in it (Zoe was empress 1028–50; Constantine Monomachos died in 1055)**
H. Sophia, Kiev	**?1037–46**	**Presumed contemporary with the church which was inaugurated in 1046**
S. Marco, Venice	*c. 1040s–21st century*	*Church was begun under Doge Contarini (1042–71) and finished under Doge Falier (1086–96)*
Nea Moni, Chios	**1049–55**	**Patronage of Emperor Constantine IX Monomachos (1042–55)**
Salerno Cathedral	*1058–85*	*If the association with Archbishop Alfanus I (1058–85) is correct*
H. Sophia, Constantinople, John Komnenos panel	**1118–34**	**After John's coronation; usually assumed before the deaths of Eirene (d. 1134) and Alexios (d. 1142)**
S. Clemente, Rome	**1123**	**Church consecrated 1118–19; mosaic believed to be completed by 1125**

Table 6 (cont.)

Mosaic	Dates Associated	Evidence
Gelati, Georgia	**1125–30**	**Presumed contemporary with building of church under patronage of King Davit IV (1089–1125) – unfinished at his death**
SS. Maria e Donato, Murano	**1125–41**	**Presumed contemporary with building**
S. Maria in Trastevere, Rome, façade and apse	**1130–43**	**Presumed contemporary with reconstruction of the church by Pope Innocent II (1130–43)**
Cefalù	**1131–48**	**Church built 1131–48, mosaics presumed contemporary**
Cappella Palatina, Palermo	**1143–70s**	**Chapel built between 1132 and 1140; cupola inscription gives 1143 for completion; later 12th-century adjustments on style grounds**
Martorana, Palermo	**1143–51**	**Deed of endowment dated 1143 suggesting it was more or less complete by then**
Palazzo Normanni, Palermo	*1140s–1190s*	*Because everything else in mosaic in Sicily is Norman and from this period*
S. Francesca Romana/S. Maria Nova, Rome	**1159–81**	**Presumed contemporary with reconstruction of the church by Pope Alexander III (1159–81)**
La Zisa, Palermo	**1160–70**	**Relates to known dates of construction of building**
Church of the Nativity, Bethlehem	**1169**	**1169 comes from an inscription in the church**
Monreale	**1180–90**	**Church begun by 1174 and finished at some point in 1170s**
S. Tommaso *in Formis*, Rome	**1218**	**Date given on mosaic**
Shajarat al-Durr mausoleum, Cairo	**1250s**	**Presumed contemporary with the building**
Mausoleum of Baybars, Damascus	**1260s–1270s**	**Presumed contemporary with the building**
Florence Baptistery	**1260–1305**	**Documents about the making of the mosaics**
Salerno Cathedral	***c.* 1260**	**Donor image of Giovanni da Procida (1210–98)**
Sancta Sanctorum, Rome	*1277–80*	*Associated with restorations of Nicholas III (1277–80)*
Panagia Paregoretissa, Arta	**1280s–1290s**	**Dedicated in *c.* 1290**
Porta Panagia, Pyli	**By 1283**	**Dedicated in 1283**
S. Maria Maggiore, Rome, apse	***c.* 1290–*c.* 1325**	**Torriti's inscription gives 1296 for completion; presumed contemporary with work of Nicholas IV (1288–92) and completed by Cardinal Giacomo Colonna after the pope's death**
S Maria Maggiore, Rome, façade	**Before 1305**	**Presumably part of 13th-century work; done by Rusuti, who was in France by 1305**
S. Maria in Aracoeli, Rome, panel	*1290s*	*Depicts Giovanni Colonna*
S. Maria in Trastevere, Rome, Life of Virgin	**1290s**	**Known to have been done by Cavallini in the 1290s, with Bertoldo Stefaneschi as patron**
S. Miniato al Monte, Florence (apse)	**1297**	**Inscription on mosaic**
S. Maria Assunta, Pisa	**1301–2; 1330–50; 1400–50**	**Connected to Cimabue, Pistoia and Baldovinetti respectively**
Parekklesion of the Pammakaristos Church (Fethiye Camii), Constantinople	**1305–10**	**Presumed contemporary with the building of the parekklesion between 1305 and 1310 by Maria Doukaina Komnene Branaina Palaeologina for her husband, Michael Glabas Tarchaneiotes (d. soon after 1304)**
Chora Church (Kariye Camii), Constantinople	**1315–21**	**Presumed contemporary with the building under the patronage of Theodore Metochites between *c.* 1315 and 1321**
Holy Apostles, Thessaloniki	**1310–14; or *c.* 1329**	**Inscriptions for the earlier date; dendrochronology for the later date**

Table 6 (cont.)

Mosaic	Dates Associated	Evidence
Chapel of S. Maria del Principio, S. Restituta, Naples	**1320s**	**Patron is Robert of Anjou (1309–43) and the artist recorded in an inscription in the mosaic as Lellio da Orvieto or de Urbe, i.e. Rome**
Orvieto	**1330–38**	**Documents about the making of the mosaics**
Sitt Hadaq, Cairo	**1339–40**	**Presumed contemporary with the building**
Emir Aqbugha, Cairo	**1339**	**Presumed contemporary with the building**
S. Marco, Baptistery, Cappella S. Isidoro	***c.* 1350**	**Presumed contemporary with the building under the patronage of Andrea Dandolo, doge 1343–54**
Prague, Last Judgement façade	**1370–71**	**Documents say it was completed by 1371**

iconography took off, though that too is not a given. They are also given a *terminus post quem* in the form of the Arab raids on Cyprus in the seventh century: supposedly they cannot postdate these because Cyprus fell into decline as a result of Arab incursions. However, recent research suggests a different picture for Cyprus, removing this check, so where does that leave the date of these three mosaics?[2] Iconography too is as problematic as style if it assumes a progressive and teleological development of images. One patron's use of a certain type of image in 410, say, is no guarantee of what another patron might choose the next year or a hundred years later. Discussion of iconographies sees changes almost as surprising and remarkable, but one might equally well see variation as the norm, suited to the specific church and patron.

Because I felt it useful to map the extent of wall mosaics, I was obliged to make some decisions about dating them. I have not tried to redate mosaics: that would require a different sort of book. Rather, where the date is uncertain or contested, I have indicated this in my discussion of the mosaic. On the maps, however, I have been forced to make a decision and so, in every case where a mosaic is dated across centuries, I have deliberately chosen to map it at its earliest plausible date. So, for example, with the Rotunda in Thessaloniki (fourth to eighth century), I have put it into the chapter and map dealing with fourth-century mosaics. However, I have noted this in the Appendix, which lists the sites located on each map. This is not entirely satisfactory but it seemed a consistent solution, and I do not think that it affects my overall conclusions about the scale and distribution of mosaics in any major distorting fashion.

The maps in each chapter bring together the where and when.[3] They are meant to be neither definitive nor conclusive. They are a snapshot of the wall and vault mosaics for which physical evidence survives that have been recorded in the *Database of Medieval Wall and Vault Mosaics* as of April 2016.[4] I am sure more mosaics will be added to this database and these may, in the future, affect ideas about the distribution of mosaics. However, the numbers in the database and the spread that they indicate suggest to me that a great many new mosaics will have to be added really to alter the patterns of high and low numbers and general distributions that are now apparent. The material evidence for the wall and vault mosaics in the database varies from the presence of the mosaic on its original wall to the discovery of a scatter of tesserae found on a site and felt by the discoverer to indicate the presence of wall mosaic. It is perfectly possible under this last heading that material has been included that is irrelevant. I would justify this by

underlining a point I made in the Introduction to the book as a whole: what we have is not all there was. There was more wall mosaic than that which survives. Evidence for some of this mosaic exists in written texts, for example, recording it in some form or other. I have not used this material in the maps: it can be complicated, unclear and uncertain, and so I chose rather to use it instead in my discussion only. I should also make it clear that the maps record **NEW** mosaics each century. They do not show what was already in existence or highlight what was destroyed. The risk is that we forget that mosaics, century by century, were made not in a vacuum but in the context of already existing mosaics. All of these caveats aside, I think the task worthwhile for what the maps do show about the quantities of mosaic surviving, the apparent peaks and troughs in its manufacture, and the patterns of its distribution.

The maps highlight just how patchy the survival of mosaics is. In Istanbul, for example, of the over five hundred churches that were once in Byzantine Constantinople, about thirty now survive (Table 7).[5] Of these, some seventeen offer some physical evidence of having possessed mosaics. In Rome, in contrast, physical evidence of mosaics survives from at least thirty-three churches (Table 8).[6]

Of course, this disparity is unsurprising since Rome has remained a Christian city since the fourth century, but it is worth remarking on how many mosaics survive from Rome and what that might imply (the issue of how many mosaics from Rome have been destroyed since the Middle Ages is another story). Rome tends to get overlooked in art historical discussions of 500–1100 and its wall mosaics very rarely get much discussion. Where they do, they suffer more than any other art form from that fundamental assumption about mosaic art as Byzantine, coupled with the belief that Roman art was the descendant of an implicitly distinct and superior East and that Rome was a somewhat passive recipient of Byzantine imagery.[7] But Rome was rather more than that. It was a major city throughout the Middle Ages, a city of importance to both Latin and Greek cultures, a place where two Christian worlds met and communicated. Its mosaics – almost all those that survive were papal commissions – need to be understood in the context of Roman political, religious and cultural history, as well as Roman art history. And they need to be interpreted more widely in their medieval context. Just why did mosaic continue to be used in Rome throughout the medieval period? And how was it seen and understood in Rome? As Byzantine? Or as Roman? Or even Christian? The relationship between Byzantine, Western (often Roman) and Islamic mosaics is one that runs throughout this book.

The final issue I aim to consider in this second part of the book is the 'why' of these mosaics. I have been keen to situate them as works of art that someone paid for, for a reason, and to

Table 7 Istanbul: surviving buildings with surviving mosaics

Building	Date of mosaics by century
Chalkoprateia	5th
St John Studion	5th and 10th
Hagia Sophia	6th, 8th, 9th, 10th, 11th, 12th, 13th, 14th
Hagia Eirene	6th and 8th
St Polyeuktos	6th
SS Sergios and Bachkos	6th
Kalenderhane Camii	6th and 13th
Bukoleon	10th
Myrelaion	10th
Mother of God Glykeria	11th
Odalar Camii	11th–12th
Pantokrator	12th
Chora (Kariye Camii)	12th and 14th
St John Prodromos (Constantine Lips)	13th and 14th
Panagiotissa	13th
Vefa Kilisse Camii	14th
Pammakaristos (Fethiye Camii)	14th

Table 8 Rome: surviving churches with surviving mosaics

Church	Date of mosaics by century
Old St Peter's	4th, 8th, 12th, 13th, 14th
The Lateran	4th and 13th
S. Costanza	4th
Catacombs (various)	4th
S. Pudenziana	4th–5th
S. Maria Maggiore nave and apse	5th and 13th
S. Sabina	5th
S. Giovanni (Lateran Baptistery)	5th
St John Evangelist (Lateran Baptistery)	5th
SS. Cosmas and Damien	6th
S. Lorenzo *fuori le mura*, Rome	6th
S. Teodoro	7th
S. Agnese *fuori le mura*	7th
S. Stefano Rotondo	7th
S. Venanzio (Lateran Baptistery)	7th
S. Sebastian panel in S. Peter *in Vincoli*	7th
S. Martino ai Monti	8th or 9th
S. Prassede and Zeno Chapel	9th
S. Maria in Domnica	9th
S. Cecilia	9th
S. Marco	9th
SS. Nereo ed Achilleo	9th
S. Bartolomeo all'Isola	12th
S. Clemente	12th
S. Maria in Trastevere, façade and apse	12th and 13th
S. Maria in Monticelli	12th
S. Francesca Romana	12th
S. Paolo *fuori le mura*	12th, 13th, 14th, 15th
S. Crisogono	13th or 14th
S. Tommaso *in Formis*	13th
Sancta Sanctorum	13th
S. Maria in Aracoeli panel	13th
S. Croce in Gerusalemme	15th

suggest that they have a historical importance. Art does not illustrate history: it is a part of the historical record and carries as much weight and significance as any written text. Because the bulk of surviving mosaics were the result of the patronage of wealthy and powerful people, much of the thrust of my discussion has been about the significance of mosaics and of mosaic itself when used by rulers and popes. I have tried to ask why a particular mosaic is in a particular place (rather than anywhere else), for example.[8] To this end, I have spent less time on the iconography and the different interpretations of that iconography than perhaps I should have done. What the image means in terms of what it shows is the most frequently discussed aspect of mosaics and I could not do justice to that side of each mosaic without making this book at least four times as long. What my focus on new mosaics, century by century, also does is ignore how the meanings of the old mosaics almost certainly changed over time as images were interpreted and reinterpreted by their audiences, becoming more or less relevant in various ways. It is easy to smooth out the accretions and modifications made over time in buildings and to mosaics, and to forget that the old mosaics were still there playing a part in people's views and uses of mosaics. St Peter's is typical of this. Between the fourth and the fifteenth centuries, its mosaics were installed, extended, refurbished, changed, repaired and removed on countless occasions, altered to suit liturgical and artistic changes, described by historians and artists with varying degrees of reliability. But throughout all of this, the mosaics almost certainly continued to be influential and to affect the making of new mosaics in Rome, and almost certainly elsewhere.

A further point to which not as much attention is paid as it should be is the relationship between mosaics and other forms of monumental art, notably wall painting. Maria Andaloro and Serena Romano's *Corpus* of medieval art in Rome allows a few tentative figures to be extrapolated.[9] In the volume dealing with 312–468, there are forty-eight entries, of which sixteen are mosaics; for the volume covering 1050–1198, there are sixty-two entries in all, but only seven mosaics, and for 1198–1287,

sixty-nine entries but eight mosaics. These figures suggest that mosaic was never a hugely popular and widely used art form – but one might expect that, because of the costs involved. It is an area that needs much more exploration, but this book is already too long.

My aim has been to integrate mosaics into a broader discussion of medieval Europe and to show that understanding art adds a greater dimension to our understanding of the past. Rather than discuss the 'history' and leave the art out, perhaps giving it a chapter of its own, I have sought to integrate the two, putting the mosaics at the centre of the history. Mosaic as an artistic medium was a strand that spread across the Mediterranean, used in both Christian and Muslim East and West. An awareness of the geographical and temporal extent and distribution of wall mosaics does contribute to an understanding of issues around manufacturing and trade in the Mediterranean world but it also says things about other contacts, artistic, political and religious alike. I have already discussed in some detail the problems with the idea that all mosaic came from Byzantium. This next part of the book essentially marshals evidence for saying that that was not the case but in so doing, it shows that mosaic itself as a medium, the simple fact of its use, tells us something about the significance of mosaics, in conceptual terms. We shall see mosaic valued as a sign of Romanness, of being a part of the world of the Roman Empire, and as a sign of Christianity.[10] In the Western Christian world, especially in papal Rome, it became something representative of the Early Christian, apostolic world, and, more widely, its use served as a way of evoking an Early Christian heritage. In the Eastern Roman Empire, it remained a symbol of the Roman nature of that Empire. Its use outside the territories of 'old Rome', in the Islamic world for example, or by the Rus′, was perhaps a borrowing and a translation of these Christian and Roman (and even Byzantine) glories into other faiths and other cultures. The very medium became a message in itself. This idea of exploring the medieval world and its self-definitions through its different religious communities is not a new one; in the political sphere, for example, it is something of a commonplace. However, it is not a concept that has been used as widely in considering the material world, and mosaics are a case in point.

The discussions in each chapter in this next section are ostensibly structured around a particular theme. Many of these themes are relevant to more than one century and I have tried to keep them running through the narrative as a whole, but I have also sought to highlight specific topics at particular points. I open with a discussion about where wall mosaics might have come from and why they might have been adopted as an important part of the decoration of Christian religious buildings. I move to consider issues around the developing iconographies of wall mosaics, where I have taken the view that the inconsistent survival of mosaics throughout the medieval world means that we should understand each mosaic as a type, not a prototype. I consider the roles played by powerful patrons in the use of mosaic, why it was considered suitable for use in the ways in which it was used, why it was adopted in the Islamic world of the seventh and eighth centuries, what the messages of the medium as medium might have been to audiences in the Christian and Muslim worlds alike, whether it offered any sort of 'universal' or even 'universalising' language or whether what we see in mosaics reflects local and individual choices and circumstances (my answer, of course, falling somewhere between these two positions). And finally, and briefly, I consider the question of why mosaic ceased to be used, why it seems to have fallen from favour.

Questions of how and why art moves seem particularly pertinent for wall mosaics.[11] The glass from which they were made forms

one area of discussion. Eva Hoffman made the case for the existence of broader cultural mechanisms than cross-cultural exchange, ones through which objects extended beyond themselves, a common visual language across cultural and religious boundaries in which an object could make sense. She saw that objects could be made from selections of recognisable repertoires of images that had both specific contexts and meanings but a broader Mediterranean currency. I would say that mosaics hold a place in this model, especially if we replace 'object' with 'medium'. Mosaic itself, the very stuff from which these images were made, had a currency, not a monolithic place, not seen in the same way by everyone in all places at all times, but with different levels of meanings and significance, appropriated and used by Romans, Byzantines, Latins, Normans, Venetians, Umayyads, Fatimids, Rus′, so many of the different cultures of the medieval Mediterranean world, but valued and esteemed by all of them. This next part of the book seeks to unpack some of these aspects.

Chapter 5

IN THE BEGINNING: WALL MOSAICS IN THE FOURTH CENTURY

Looking up into the vaults of S. Costanza in Rome (Fig. 61), they appear to have been carpeted with mosaic. On a white stone background, in a series of distinct sections, curling vine scrolls are filled with putti harvesting grapes and pressing them into wine; elsewhere, dolphins attack octopuses; birds, plants, fruits, flowers and silver vessels are scattered across a plain white background; roundels with busts and figures appear amidst floral patterns; single cavorting cupids and psyches are set among animals and birds; geometric designs of lozenges, octagons and crosses occupy neat panels.[1] The motifs and patterns all echo designs from floor mosaics across the Roman Empire, and yet are on the ceiling. The formal roundels and geometric designs, and the vine scrolling, are a staple on floors; the more scattered scenes evoke the illusionistic 'unswept floor' type of design, seen in Roman (for example, at Pompeii) and North African floors; and the compartmentalising of elements of the design into panels is a standard organisational device for floor mosaic.[2] In addition, like floor mosaics, these mosaics are largely made of stone, with glass, including gold glass, used sparingly as highlights, bringing out the details of vessels and fruits for example. Whilst these vault scenes evoke typical Roman imagery from floor mosaics, the images in the two surviving conches of the niches of the cross-axis portray Christian figural scenes: in one, a bearded toga-clad Christ, or perhaps God, seated on a globe hands something to a beardless man in a toga (perhaps the giving of the Old Testament Law to Moses or the giving of keys or a codex – the object is not clear – to St Peter); in the other, a beardless youthful Christ hands a scroll to a bearded man whilst a beardless man stands by (the so-called *Traditio Legis*, the giving of the New Testament Law by Christ to Peter and Paul).



Figure 61 Vault mosaic, S. Costanza, Rome, fourth century, looking very like floor mosaic in the ceiling. Gold tesserae are used sparingly to pick out details.

S. Costanza introduces many of the themes that will run throughout this section of the book: questions of patronage and status; the role of religious images; changing iconographies; the fundamental question of why wall mosaic. The building itself is usually identified as the mausoleum of Constantina, daughter of Constantine the Great, who died in 354. Her sister, Helena, wife of the Emperor Julian, was also buried here. The mausoleum is a fourth-century building, though precisely to when in the fourth century it dates is uncertain, and the mosaics are widely but not universally accepted as contemporary. The mausoleum may have been Constantina's commission before her death; it may have been completed later by her brother, Constantine's successor, the Emperor Constantius II.[3] As an imperial mausoleum, it follows very much in the pattern of such third- and fourth-century mausolea, even down to its plan as a domed circular building, a rotunda. What is different about it is that, as a Christian mausoleum, it formed part of a sacred complex: it was originally attached to a basilica church dedicated to St Agnes which is now in ruins. Further, there was an innovative development in its plan: the vaulted ambulatory running around the central space is not blocked off from that space by solid walls but joined to it by a colonnade. In other words, the two spaces, central rotunda and ambulatory, interpenetrate, and as a result, the central space is flooded with light whilst the ambulatory is contrastingly darker. The white mosaic of the ambulatory, highlighted in gold, serves as a means of lightening this space (Fig. 62).



Figure 62 Ambulatory and central space, the transition from dark to light, S. Costanza, Rome, fourth century.

S. Costanza sets up the issues that this chapter will address: the relationship of wall to floor mosaics, and the topic of why mosaic was used on walls at all; the question of why there were mosaics in Rome (as opposed to elsewhere) and the relationship that mosaic as a medium had with both Christianity and imperial power. The mosaics of the mausoleum have been a source of much discussion. They have been used to suggest that wall and vault mosaics were invented in the early fourth century and that mosaic-making was influenced by both wall painting and floor mosaics. They have also been employed as evidence that wall and vault mosaics were first used on a large scale in Christian buildings.[4] In contradiction, because two panels, depicting putti harvesting and pressing grapes, have been interpreted as overtly pagan, it has been suggested that the 'pagan' and 'Christian' mosaics are of different dates because they could not possibly have been installed together as part of the same programme. There is no technical evidence in the mosaics themselves to suggest this and I will explore the conceptual arguments about this assumption below. This chapter, in fact, will engage with questions of the spread of wall mosaic (it was not a fourth-century Christian invention; it was influenced by other media) and its use.

FLOOR AND THE BEGINNINGS OF WALL MOSAIC

Before looking at the spread of wall mosaic, it is worth looking at its development as a medium. Wall mosaics certainly caught on in the Roman Empire, albeit not to the extent of floor mosaics. Pliny mentioned that glass mosaics

on vaults were a 'new' invention in the first century, one not found in Agrippa's baths in the Augustan period, and Seneca and Statius also mention glass mosaic as a fashionable new decoration for vaults in baths.[5] Floor mosaics were a very popular medium of decoration in the Classical Greek and Roman worlds, used throughout the empire and into the Middle Ages.[6] Although they were already a well-developed medium before mosaic started being put onto walls, it seems more than likely that there was a close artistic and indeed technical relationship between the two forms.[7] As is apparent in the vaults of S. Costanza, elements of the repertory of floor mosaics such as repeating patterns, the compartmentalising of designs, the use of ornamental borders, and even figural and decorative motifs appear time and again in wall mosaics.[8] The ribbon decoration that wrapped its way around the borders of some floor mosaics is echoed in wall mosaics, at the 'Mausoleum' of Galla Placidia for example; vessels with twining vines and acanthuses springing from them are found in both media; and the compartmentalised vault mosaics in the Rotunda in Thessaloniki or in Hagia Sophia in Constantinople are immediately reminiscent of designs seen also on the floor.[9] Some of the floor mosaics from the third-century Piazza Armerina resemble those on the façade of the Mausoleum of the Marcii under St Peter's.[10] Technically, as already discussed, whilst it is possible that the *musearius* or *musivarius* worked on wall mosaics whilst the *tessellarius* dealt with the floor, the two need not have been mutually exclusive. A *tessellarius* might also, at times, have been a *musearius* and vice versa.[11] Procedurally, both floor and wall mosaics relied on laying tesserae into plaster and it seems highly likely that similar techniques were employed, at least in the early days of wall mosaics: in North Africa, for example, there are examples of floor mosaics running up the wall without a break.[12] The use of *emblemata*, fine, detailed designs made separately from the mosaic and dropped into place, is another point of contact. *Emblemata* were common in floor mosaics, the easiest and quickest way of creating elaborate central panels, and it made sense to use them on walls also.[13] In Nero's Golden House, the detailed glass mosaic central octagon of the nymphaeum showing the blinding of Polyphemus could easily have been made off site before being set into its pumice background; similarly, the third-century mosaic of Pentheus in the necropolis under the Vatican looks very like an *emblema* set straight onto the brick wall. Such works were surely made in the same workshops as the *emblemata* for floor mosaics.[14]

Other media also influenced the appearance of these early wall mosaics. Stuccowork was one such: presumably its use helped in the creation of the illusion of coffered spaces on floors and walls alike.[15] More significant was the relationship between wall mosaic and wall painting.[16] Initially, the figural imagery, often plants and animals, of wall mosaics derived from the traditions of garden painting, with which mosaic shared themes and locations. However, by the later first century AD, surviving examples of wall mosaics suggest that they could rival high-quality painting: in the nymphaeum of Nero's Golden House, the Polyphemus panel is beautifully modelled to evoke a statue group and designed to be seen from 10 metres below. Another first-century example is the large and elaborate nymphaeum in a villa near Sorrento with its illusionistic wall mosaics.[17] A second- or perhaps early third-century detached mosaic panel originally from the nymphaeum of a house attributed to Titus Claudius Claudianus on the Quirinal (Fig. 63) shows a scene of a harbour with a ship under way.[18] Composed from a mixture of glass, including blue, red and white, and stone, it reveals how mosaicists were employing mosaic almost as if the medium were paint, using small tesserae, and modelling carefully with delicate gradations



Figure 63 A detached wall mosaic from the house of Claudius Claudianus on the Quirinal, Rome, second or third century, now in the Palazzo dei Conservatori in Rome.

of colour. On the Quirinal Hill itself, the remains of what was probably a nymphaeum contain stunning wall mosaics. A curving wall, like an apse, has plant and animal decoration derived from Roman garden painting; on the outer wall, three storeys of fantasy architecture in gold and red against a blue background suggest a theatre setting; in the central aedicule were life-sized figures of Hylas and the nymphs, framing the entrance to a grotto.[19] The architectural designs in this mosaic are reminiscent of Roman wall paintings, notably the style called Pompeian Style 4, with its thin columns, receding entablatures, coffered ceilings and filigree borders. Such architectural designs remained a feature in some wall mosaics, as is apparent at the Rotunda in Thessaloniki. The lost mosaics of the dome of S. Costanza also appear to have employed illusionistic recession, imitation supports, in the form of caryatids, and coloured backgrounds for the design, features also used in painting.[20] Since underdrawing was an element in wall mosaic preparation, the sharing of techniques, skills and styles seems highly likely and throughout the 1,400 years covered by this book we shall see time and again little pieces of evidence suggesting that an artist could be both a painter and a mosaicist.

The vault mosaics of S. Costanza look like floor mosaics not just because of their design but also because of the media used. As with floor mosaics, from the white backgrounds to the figures, the mosaics are largely set with stone, with glass used most obviously for highlighting details – the rims of the silver vessels for example. Only gradually did glass come to dominate in wall mosaics, with considerable experimentation in various materials including glass, faience and Egyptian blue.[21] Initially wall mosaics were largely made of shell, pumice, stones and even paint, though Egyptian blue, in the form of glassy pellets, was always popular. Threaded glass rods, usually in yellow, white and blue or simply white and blue, seem to have been used, perhaps until the middle of the first century; bits of broken glass vessels and glass disks were also used in the earliest examples.[22] Coloured glass started to appear on walls and vaults perhaps at the start of the first century, though it was used in floor mosaics from much earlier.[23] Glass tesserae, which is to say deliberately cut cubes of glass, were used for figured subjects in floor mosaics certainly from the Hellenistic period on; their earliest appearance in wall mosaics seems to be in the reign of Tiberius (14 BC–37 AD), perhaps in the tomb in Rome known as the Columbarium of Pomponius Hylas, where glass tesserae are used over the entrance to the columbarium on a mosaic plaque with the names of Pomponius Hylas and his wife.[24] The earliest evidence of the use of gold tesserae appears to be from the 50s AD in the decoration of a series of niches in the Gardens of Lucullus in Rome: the thinness of the *cartellini* of these indicates that they could only have been produced from blown glass, and it needs to be remembered that the techniques of glass blowing seem to have reached Rome in the early years of the first century AD.[25] Gold tesserae appear to have been used in Nero's Golden

House, and they have also been noted from the Stadium of Domitian.[26] But gold was not automatically used in wall mosaics, and not necessarily in large quantities. There is no evidence for gold mosaic among the wall and vault mosaics from the major third-century project that was the Baths of Caracalla, for example.[27] Gold tesserae are used only sparingly in S. Costanza to bring out details and create glittering effects in the darker ambulatories by heightening details or highlighting elements of the image: there is a gold roundel, for example, above the niche where Constantina's tomb was originally located. Nor is gold used in either of the two figural mosaics surviving in the apses, where Christ's halo is blue and the background white. This needs to be taken into account when descriptions of buildings speak of the decoration being in the form of sheets of gold: gold decoration did not necessarily mean mosaic.

The use of glass in floor mosaics was always exceptional and in small quantities, partly because glass was a more fragile medium underfoot than was stone. If anything, it was used in *opus vermiculatum* and in the fine detailed *emblemata*. But glass tesserae made all the difference to wall mosaics, for glass was a perfect medium to use in the context of water and garden architecture. Wall mosaics broke away from the monotonous rusticity of the browns, greys and drab stones and shells of the earlier grottoes, expanding into creations of great colour, splendour and fantasy which increasingly used figural images. In the Golden House, green, brown and even gold glass tesserae survive in the composition of Odysseus and the Cyclops, and what little remains of these mosaics suggest that they must have been spectacular and sophisticated.[28] What is also apparent in the surviving use of glass in Roman wall and vault mosaics is a developing appreciation of the potential of the medium on a curved surface: of using glass as a sparkling, reflective surface, playing with light and water, and very different from the effect of stone, pottery or shell. Glass mosaic tesserae were in use on a large scale on the walls and vaults of baths by the second century, at Optis and Leptis Magna, for example, as well as at Carthage, and in the Baths of Caracalla and Diocletian in Rome.[29] By the late third century, and almost certainly earlier, glass tesserae were used in the great halls of imperial palaces, as is the case with Diocletian's Palace in Split.[30] Even then, however, as at S. Costanza, a wide range of other materials, including stone and shell, continued to be used in wall mosaics. Indeed, the use of these other media never died out in medieval mosaics; it simply diminished in quantity and was used for the creation of deliberate visual effects.

Where the glass used in these wall mosaics has been analysed, it has proved to be almost all of the standard Roman glass, a natron glass decoloured with antimony.[31] As noted earlier, archaeological evidence for the production of primary glass in Italy in this early imperial period simply does not exist, though chemical and geological evidence indicates that it is probable that it was made in the region; it is likely that raw glass was (also) imported from the Levant. However, there is no reason why the secondary glass production of coloured glass tesserae should not have taken place in Italy, an area of the empire with a strong tradition in glass-working.

THE DEVELOPMENT OF WALL MOSAICS: A SHORT HISTORY

In terms of location, the earliest wall mosaics have been found in Latium and Naples, gradually spreading into north Italy and then beyond, throughout the rest of the empire. Pompeii, incidentally, is one of those fortunate survivals that makes it clear how much evidence for wall mosaics must have been lost.

The concept of covering walls with pieces of shell, stone and glass is known from at least the third millennium BC. But the more sophisticated types of design that we think of associated with the term 'wall mosaic' seem to have become increasingly popular specifically in Rome in the late republican and early imperial periods, the first centuries BC and AD, and it seems fair to say that wall and vault mosaic developed initially in Rome and Italy.[32] An encrusted form of decoration was used until perhaps the mid-first century AD almost exclusively to decorate the caves and grottoes that formed a part of villa garden designs popular among wealthy Romans. Such settings, embellished with fountains and pools, provided a cool secluded place for relaxation and entertainment. These grottoes or nymphaea were ornamented with pumice, volcanic rocks, chips of marble, pellets of Egyptian blue and sea shell, with the aim of creating artificially the sensation of a natural cave.[33] The decoration became increasingly complex: in a small nymphaeum of the 'Villa of Cicero' at Formiae (*c.* 50–70 BC), marble chips and shells mark out the illusionistic form of a portico and evoke stuccoed and coffered ceilings.[34] In Rome, the only surviving example of a completely preserved dome decorated in mosaic, stucco, fresco and shells comes from the Palatine Hill, the so-called Lupercal of Romulus and Remus, the 'cave' in which they were found by the she-wolf, which may simply be an Augustan grotto or nymphaeum, dated to the first century AD.[35] Increasingly, wall mosaic started to appear in settings other than the aristocratic. Evidence from Pompeii makes it clear that, by the mid-first century, mosaic nymphaea and fountains were a popular feature even in fairly modest houses, often lined up on the same axis as the main entrance, ensuring that visitors could not miss them.[36] Mosaic began to be employed in the decoration of public baths, places of worship and even tombs, and possibly also theatres. Many of these were settings where wall painting was also used, but for nymphaea, baths and grottoes and the like, in contrast to paint, mosaic offered waterproofing and durability. Perhaps for similar reasons, by the third century, mosaic was used on the external façades of buildings.[37] New motifs – plants, animals, birds – were also developed; the medium started to look more like what we would call 'wall mosaic'.[38]

Wall mosaic was a progressively popular form of decoration among the great imperial builders of Rome such as Nero, Domitian and Hadrian and, later, Caracalla and Diocletian.[39] From the Golden House onward, wall and vault mosaics played a gradually increasing part in the decoration of imperial palaces: traces of mosaic have been found in many of the major surviving palaces and mausolea of the third and fourth centuries. In addition to Diocletian's Palace in Split, Constantine's Basilica in Trier, and the early fourth-century mausoleum, perhaps of Maximian, at S. Vittore in Milan, as well as the mausolea of Galerius and of his mother in Gamzigrad (Romuliana) in what is now Serbia, and the Tor de'Schiavi and the mausoleum of Helena in Rome all contained mosaic.[40] Wall mosaic was also used in other public spaces such as theatres and circuses: one such survives in the Colosseum in Rome.[41] By the second century, they were also being used in religious contexts, notably in shrines of Mithras, which often shared the same cave or grotto theme as private nymphaea, and then by the third century in catacombs, surviving in Rome and Naples. These mosaics invoked both pagan and Christian deities.[42] In a tomb niche in the Catacomb of Domitilla, used between the second and seventh centuries, scenes included Christ, possibly shown in his majesty and flanked by Peter and Paul (if so, this would be one of the earliest versions of this scene), the raising of Lazarus, the Old Testament scene of the Three Hebrews in the Fiery Furnace, assorted saints and one unidentified scene.[43] But mosaic was never

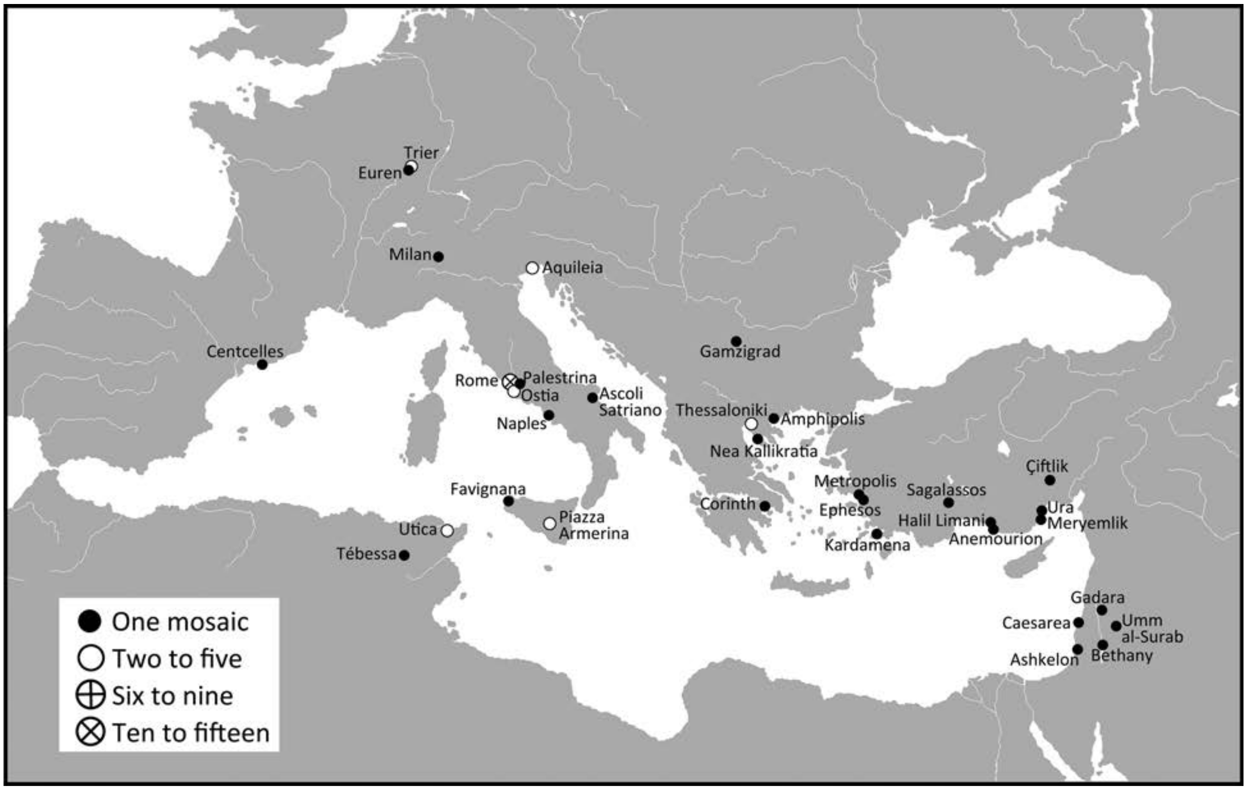
exclusively an imperial or religious medium. A nymphaeum or hypogaeum dated to the mid-fourth century discovered beneath the Via Livenza in Rome seems to have been the commission of a wealthy private individual. Its scenes are a mix of pagan and potentially Christian, with a fragment of mosaic appearing to show St Peter striking water from a rock.[44] There was a long-standing Roman tradition of aquatic themes, especially in nymphaea, and they could easily be taken into the Christian sphere or be used along the broad edges where 'Christian' and 'pagan' art met.

WALL MOSAIC IN THE FOURTH CENTURY

By the fourth century, Rome was the heart of the Mediterranean world, its empire stretching from Britain to North Africa, Spain to the Middle East. However, at the end of the third century, it had been recognised that the empire could not be easily ruled by one man from one centre. In 293, the Emperor Diocletian reorganised imperial government by systematising the division of the empire into two parts, West and East, each ruled by an Augustus supported by his junior colleague and putative successor, a Caesar. The Western part was based in Rome (and then later in the fourth and fifth centuries, Trier, Milan and Ravenna) and Latin-speaking; the Eastern became focused on Constantinople and was Greek-speaking. But certainly in the fourth and fifth centuries, both parts were closely connected and often ruled by members of the same family, and Latin remained the official legal and military language of the East until well into the sixth century. The Roman Empire was also an increasingly Christian empire. Diocletian had been a noted persecutor of Christians but in the power struggles before and after his death, Constantine, who eventually came out on top, had enlisted the support of the God of the Christians. The result of this was to give Christianity a progressively influential official role in Roman culture. It is in this context of a powerful Roman Empire based in Rome but whose emperors and their capitals were increasingly removed from that city, and the gradual adoption of Christian beliefs within that empire, that we need to understand the fourth century and its mosaics.

The inference of the surviving material is that, in the first to fourth centuries, wall mosaics were very much a Roman or Italian preserve. In Frank Sear's catalogue of 305 extant Roman wall and vault mosaics from the first to the early fourth century, the bulk were located in Italy, 162 of the 305, in all.[45] However, as his catalogue also revealed, by the third and fourth centuries AD, wall mosaic was used more widely across the Roman world, from Gaul and North Africa to Greece, Asia Minor and the Levant.[46] It seems likely that the medium was developed, or at least popularised, in Rome itself and spread outwards from there across the empire.

Map 1 builds on Sear's catalogue and extends his list of fourth-century wall mosaics from thirty-seven to fifty-six. It indicates that mosaic was relatively widespread across the Roman Empire, though located particularly in the Mediterranean world, above all in Italy and east of Italy. Evidence for at least twenty-seven mosaics survives from Italy; of these, fourteen, the greatest concentration, were in Rome. The eastern provinces of the empire together contribute as many wall mosaics as Italy: eight are noted in Asia Minor (modern Turkey), five recorded from the Levant, six from Greece and three from North Africa. The western provinces register seven. Of the cities of the empire, indications of wall mosaics have been uncovered from Rome, Milan, Thessaloniki and Trier, all imperial cities, and from Naples in the west and Ephesos in the east. The examples further afield, Trier and Centcelles, indicate that wall



Map 1 New wall mosaics in the fourth century.

mosaic was used beyond the Mediterranean basin but imply that its use further afield was more limited, potentially with an imperial bias. The fragments from Trier all come from imperial buildings, whilst the mosaic at Centcelles, like S. Costanza, is from a building believed to have been an imperial mausoleum, that of Constantina's brother, Constans. Trier itself was an important regional centre of mosaic production, both floor and wall, in the third and fourth centuries.[47]

Much of the evidence for wall mosaics comes from churches, often funerary churches; only a handful belong to definite secular contexts. Mosaic continued to be used in baths – at Faragola (Italy) in the third/fourth centuries and at Sagalassos in the fourth, for example, and all the surviving North African examples are from fountains and baths, with none recorded from an ecclesiastical context.[48] There is surprisingly little evidence for its use in this century in private houses and nymphaea in the West or East. At Ephesos, in one of the so-called Terrace Houses (private aristocratic houses), dated to *c.* 400, a mosaic vault depicts vines enclosing a scene of Eros leading a grape-filled chariot drawn by panthers and a medallion with life-sized busts of Dionysios and Ariadne, themes not a million miles from S. Costanza.[49] Whether this lack of evidence is because wall mosaic was no longer used in this context or whether it is because the material has not survived or been noticed is impossible to tell. In the Western part of the empire, including Italy, surviving wall mosaics often come from imperial contexts, notably mausolea (Helena's in Rome, for example, or Galerius' at Gamzigrad), palaces (the *tablinium* of an imperial palace later part of S. Maria Antiqua in the Forum of Rome)[50] and churches, though a handful show the medium was still being used

in nymphaea, fountains and baths. In the Eastern part, surviving mosaics offer a different picture. There are quite a few sites where evidence for fourth-century glass wall mosaics comes from small-scale, often anonymous buildings, such as the cryptic Building III.5 at Anemourion and from relatively small and seemingly unimportant places: a church with an unknown dedication on Kos; a church at Çiftlik in the Pontos; a cave church at Meryemlik in Cilicia.[51] The implication is that, in the East at least, mosaic was more widespread and potentially available to those who ranked below emperors and patriarchs. Looking at the pattern of distribution offered by Map 1, with the scatter of sites along the southern part of Asia Minor and the Levant, it is conceivable that this may bear some relation to the production of primary glass in the region, and to its being relatively accessible as a material.

While these figures and distribution patterns are not definitive, they are suggestive. They imply that, in the fourth century, wall mosaic was very much an art form practised primarily in the city of Rome. If it was more widespread, there has been a very through removal of the materials of wall mosaics from other sites or a lack of recording in excavations. Most of the mosaics on Map 1 survive only as fragments, tesserae and plaster imprints. Very little is actually still attached to the walls: several catacomb mosaics in Rome, as well as the mosaics of S. Costanza and the apse of S. Pudenziana; the mausoleum at Centcelles; possibly the Baptistery of S. Giovanni in Fonte in Naples and the Chapel of S. Aquilino in Milan (though these have also been dated to the fifth century); and, debatably in terms of its date, the stunning set of mosaics in the Rotunda at Thessaloniki. No physical evidence for fourth-century wall mosaics survives from major cities such as Constantinople, Alexandria and Antioch, but their existence in other important imperial cities makes it plausible that there were such mosaics there.

In Constantinople, it seems reasonable to assume that, just as the Constantinian emperors commissioned wall mosaics for their great churches in Rome, St Peter's, the Lateran and S. Paolo *fuori le mura*, so too in Constantinople, in Hagia Sophia, Hagia Eirene and the Holy Apostles. But we do not know. The only evidence we have comes in a note in the eighth-century *Patria*, a sort of guidebook to Constantinople, implying that Constantine put mosaics in a church of St Stephen that he founded in Constantinople.[52] In Rome itself, other churches beyond those for which we have material were presumably mosaicked. The outstanding example of vanished wall mosaics is Constantine's church, St Peter's in the Vatican, demolished, thanks to Pope Julius II, in the sixteenth century. We know from texts that it had fourth-century mosaics but there is considerable debate over what these showed and of what date they were. As for Alexandria, it was one of the great cities of the empire, a major commercial and cultural centre, with the impressive buildings expected of an important city.[53] There was much conversion of temples to churches and church construction in the fourth century and, with that, an impressive line in church decoration that featured considerable use of inlaid glass pieces joined to form larger compositions (*intarsia*). Floor mosaics were popular, and it is possible that some traces of mosaics on bath house walls survive, but nothing else.[54] In Antioch, lavish floor mosaics are known in some quantity but almost nothing survives from the walls. The Golden Octagon, the cathedral church of the city founded by Constantine, was lavishly decorated with marbles, gold and precious stones: whether this included wall mosaic is not certain but it is certainly plausible.[55] The Byzantine chronicler John Malalas, writing in the sixth century, maintained that the fourth-century emperor Valens founded four big basilica churches in Antioch that contained marbles and mosaic, but there is no further

evidence for these. The sixth-century author Chorikios, writing about the churches in Gaza, talks of their mosaics, but we cannot be sure as to the date of these. Later authors mention Constantinian mosaics in the Holy Land, one of the Magi on the exterior west wall of the Church of the Nativity in Bethlehem, another in the House of the Last Supper in Jerusalem.[56] But whether these really were from the time of Constantine and his mother Helena or whether this belief simply added to their venerability is another matter. In fact, few fourth-century writers, including the bishop and church historian Eusebius, who was Constantine's biographer and described many of his churches, make any mention of mosaics. As noted earlier, mosaics were not what interested these authors: the form of the church and its uses tended to be the significant details and in terms of fixtures and fittings, marbles mattered more. A few authors also railed against pictures (and in some cases, specifically mosaic pictures) in churches.[57] But this is not very much to go on in terms of the history of mosaic.

The patterns of the survival of material from Late Antiquity in the western and eastern Mediterranean are different. Rome, though sacked on several occasions in Late Antiquity, has retained much of its character as a Christian city. Constantinople, sacked in 1204 and in 1453, has not. What we may have are two sides of the same coin. It seems unlikely that there was as little mosaic in the eastern Mediterranean as Map 1 appears to suggest. Why would it not have been used in the major cities, especially if it was being used in smaller sites, and why would emperors not have used it in the East when they did in the West? Equally, it seems implausible that there was as little non-imperial use in the West, particularly in Italy where wall mosaic had long been a popular form of decorative art. A detailed look at these two areas may suggest a more unified picture than the surviving work implies.

WALL MOSAICS IN THE WEST

In Rome, with the exception of a (probable) nymphaeum at the temple of Minerva Medica, the surviving fourth-century wall mosaics are Christian, from a mixture of private and public contexts. The earliest-known Christian mosaics come from private contexts in the catacombs in Rome. The cemetery under St Peter's was in use at least by the third century and contains both pagan (a scene of the death of Pentheus just outside Mausoleum Φ) and Christian wall and ceiling mosaics in Tomb M.[58] The vault shows a bearded male figure with a rayed nimbus in a chariot drawn by two (probably originally four) white horses. The rest of the vault is filled with intertwined vines of bright green glass on a yellow (not gold glass) ground. On the walls of the tomb are mosaicked scenes of Jonah and the Whale, the Good Shepherd and a Fisherman. It is these overtly Christian scenes that have led to the charioteer, who resembles a pagan sun-god in many ways, but was also a symbol of well-being and good fortune, being identified as Christ. As the original church of St Peter's, built by Constantine the Great, was consecrated in 326, this mosaic must predate that: these tombs are perhaps middle to late third century in date. Other Roman catacombs also contain Christian mosaics, though it is rare that these can be definitively dated. In the Catacomb of St Callisto, which was founded in the second century and enlarged in about 217, a mosaic of St Agnes appears to have been painted over. Other early catacomb mosaics include those at S. Agnese (S. Costanza stands next to the church of S. Agnese), where the catacomb perhaps predates 258 and is certainly not later than 305, and the fourth-century mosaic of the raising of Lazarus, the three Hebrews in the Fiery Furnace, and Christ enthroned between Peter and Paul in the Catacomb of Domitilla. Although the general association with the catacombs is with not

necessarily well-off Christians, actually they provided a burial space for rich and poor, pagan and Christian alike, and tombs there could be lavish, with sophisticated wall paintings and stucco and costly carved stone sarcophagi. However, the use of wall mosaic in a pagan context in the St Peter's necropolis suggests that, as with wall painting, Christians simply adopted the media available to them. The surprise is perhaps that a medium that works best with light should have been used below ground, but it would have reflected the light of torches and candles with great success.

Wall mosaics were also very popular in imperial mausolea. A building from Centcelles near Taragona in Spain, may be the tomb of Constantia's brother, the Emperor Constans I, youngest son of Constantine the Great, who died in 350, four years before his sister.[59] Like S. Costanza used to have, Centcelles retains much of an elaborate programme of mosaic decoration in the dome. These begin with a lower level of secular, traditional scenes of hunting (which also carried male imperial connotations). They move up to Old and New Testament scenes of salvation in the middle zones, divided by architectural columns rather than the caryatids used at S. Costanza, and at the top are standing figures of the seasons interspersed with larger panels, now very fragmentary, showing what look like scenes of imperial ceremony on a gold background.[60] Stone, marble and glass tesserae are used; interestingly, at Centcelles, the materials are arranged hierarchically, with stone used extensively in the lower two zones and glass in the upper. Gold glass is employed in the top zone and the central medallion, and emphasises the main axis of the decoration through its use in one panel in the middle zone, that of the Good Shepherd. Like S. Costanza, the mosaics echo floor mosaics, notably in the hunting frieze and in the choice of ornament – the ribbon decoration, for example.[61] At Centcelles, we have no idea where the materials and artists for the mosaics came from. Almost certainly the glass was brought specially, and the presence of Pentelic white marble tesserae suggests that some of the stone was also imported or reused.[62] The mosaicists may have come from Rome perhaps, as there is relatively little trace of wall mosaic in Spain and the mausoleum was certainly a special commission. However, taken with the earlier imperial mausolea of Diocletian and Maximian Daia, S. Costanza and Centcelles make it clear that elaborate, full iconographic schemes invoking hopes for the afterlife in wall mosaic were nothing new.

Like Centcelles and the catacombs, S. Costanza too was also essentially a private Christian mausoleum. The imagery of its mosaics has been a source of much discussion because they seem to include – or even be dominated by – pagan elements. The two panels in the vaults of the ambulatory, depicting putti harvesting and pressing grapes (Fig. 64), have been interpreted as overtly pagan, to the extent that it has even been suggested that the building was once a temple of the wine-god, Bacchus.[63] This can never have been the case: the building was built in the fourth century as a Christian mausoleum. In fact, the iconography of the mosaics is unsurprising, owing a great deal both to the imagery of floor mosaics and, more widely, to the standard iconographies of Late Roman art. Many of the motifs have also been found in other Christian contexts. The vintaging putti, for example, also feature on Constantina's porphyry sarcophagus. The same mixture of Late Roman and clear Christian imagery is also apparent in drawings recording the lost mosaics of the dome above the central space.[64] Around the base was a river scene of putti fishing from boats, a very typical floor mosaic motif (an example comes from Aquileia), whilst above this, caryatid-like figures divided the dome into twelve segments with two horizontal zones. The lower appears to have had scenes from the Old Testament, the upper scenes from the New. Even the overtly Christian scenes in the



Figure 64 Putti enthusiastically trampling grapes, S. Costanza, Rome, fourth century.

two apses share similarities with other Late Roman pagan images. This idea of the borrowing or transfer of what we define as 'pagan' motifs to Christian art was very much a standard practice in Late Antiquity and informs both the images in S. Costanza and the ways in which the more overtly Christian images from the catacombs were constructed. So it is unsurprising that Christ among his apostles took elements from scenes of teachers or philosophers among their students. The Good Shepherd was a motif well known in Roman iconography, but set in a Christian context it took on another meaning. Even the boating putti could be given an exegetical Christian interpretation if the will was there.[65] What it meant was that Christian art in terms of its basic style and iconography was not wildly different from other art around it. It was the sort of art with which people were familiar; it spoke of much more than just 'paganism' (but rather of education, learning and culture, being 'Roman' and civilised); and it provided a handy set of motifs to be used in a Christian context. In fact, the decoration of Constantina's mausoleum is not surprising. It forms a part of the essential syncretism or assimilation of artistic vocabulary of fourth-century Christian imagery, which borrowed widely, inevitably and seemingly uncontroversially from the traditional elements of Roman art.[66] Iconographically, the motifs are standard examples of Roman funerary iconography, with a theme of salvation both 'pagan' and 'Christian' found in the catacombs and on sarcophagi and in secular and Christian art alike.

Wall mosaic had been used extensively in public buildings such as the imperial Baths of Caracalla and Diocletian but monumental Christian wall mosaics perhaps took off thanks

to Constantine I (emperor between 306 and 337). After his adoption of Christianity, Constantine built three very big basilica churches in Rome, the Lateran (originally dedicated to Christ the Saviour but now the Church of St John Lateran), St Peter's at the Vatican, and S. Croce, dedicated to the Holy Cross. The nature of Constantine's own Christianity has been continuously debated from the fourth century to the present: when he 'converted'; what he converted to; how the nature of his beliefs changed. His support for Christianity and his construction of churches did not preclude his support for other religions, and indeed a display of piety was one of the necessary qualities of a 'good' emperor. Nevertheless, Constantine's church buildings marked a significant change, an imperial seal of approval for Christianity and an imperial outlay of funds on a huge scale for the public display of that faith.

His churches were not a marked departure from Roman building traditions. Pagan temples were clearly an inappropriate model for Christian places of worship but the form – the rectangular, apsed basilica, borrowed from Roman public buildings such as law courts – and the vast dimensions used in these Constantinian foundations matched those of many of the great public buildings of Rome. The basilica was essentially a rectangle with an apse, a hemispherical space vaulted with a conch, terminating one end, marking out the key part of the building. Adopted for Christian worship, the space gradually evolved in the way in which it functioned, but the apse, increasingly located at the east end, remained the focal point. It was this area that became a key site for Christian images and particularly for the use of mosaic.[67] The use of mosaic in churches broke away from the traditional focus of temples with their lavish exteriors and plain interiors. But the architecture and decoration of these buildings was not a radical departure from other Late Roman imperial constructions; it was their use and functions that were so significantly different.

We see something of these developments played out in Constantine's Roman churches. The Lateran was the first of his Christian foundations, probably built some time between 312 and 324, on his own land.[68] In size, it was a match for any of the other great public buildings of Rome: it was about 100 metres in length and 55 metres wide, and it contained a range of magnificent fixtures and fittings, most notably a vast amount of costly marble in the form of columns and veneering. The *Liber Pontificalis* ('Book of Popes'), a compilation of the lives of the popes from St Peter to Stephen V in the ninth century, also records that in the Lateran, Constantine installed a silver *fastigium* on which were silver statues of Christ and the twelve apostles, all about a metre and a half in height.[69] This *fastigium* tends to be understood as some sort of screen-like structure, almost like the later rood-screens or iconostases of Western and Eastern churches, and its statues seem to echo the Roman practice of donating silver statues of the gods to temples. It does not seem to have caught on widely in churches, partly surely for reasons of cost, but also perhaps as coming too close to copying non-Christian practices. Whether the church had mosaics, specifically in the apse, is uncertain. The *Liber Pontificalis* also claims that the emperor adorned the apse vault with 'finest gold' whilst a later inscription suggests that the patrician Flavius Felix replaced the original mosaic with a figural mosaic in 428–30.[70] This mosaic may have been of plain gold, in which case it would have served as a foil to the *fastigium*, if this was an enormous partition. Alternatively, it is conceivable that there were figural mosaics in the apse: their absence from the text proves nothing. If the central piece of this mosaic was a bust of Christ with angels and a triumphal scene, that in turn may have formed the model for the thirteenth-century replacement mosaic, itself redone in the

nineteenth century (see Fig. 156) and still adorning the apse. Although there has been discussion of how a figural mosaic and the *fastigium* might have appeared together, it remains inconclusive.[71]

St Peter's, thanks to its later history, was undoubtedly the most significant of all Constantine's buildings, located outside the city walls on top of a well-known necropolis believed to have been the site of Peter's death. It was possibly begun in the 320s and perhaps completed by 333.[72] At 123 metres by 66 metres, it was one third larger than the Lateran and, although also a basilica, it was constructed to a different plan, one incorporating a transept at the east end. It too was filled with marbles and lavish fixtures and fittings. It almost certainly had mosaics in the apse and on the triumphal arch, but whether they were Constantine's commission or those of his son and successor Constantius II is uncertain.[73] But whoever the patron, the presence of the emperor in St Peter's was strong from the moment of its construction. The apse held a seated Christ flanked by a standing Peter and Paul, which may have been a scene of the *Traditio Legis*, Christ handing the New Law to Peter, with Paul in attendance, also seen in S. Costanza. The triumphal arch may have shown an emperor (who would have been Constantine) offering the church to Christ, who was shown seated on a globe representing the world, and St Peter. If so, this would be the first known Christian example showing patron and deity together, but someone has to be the first, and this would be as good a place as any. In any case, the theme is one known elsewhere in Roman art. It derives from earlier iconographies on coins, for example of city personifications offering themselves up to victorious emperors; it was a subject that also became increasingly popular in mosaic in the fifth and sixth centuries, implying an earlier existence. The inscription from the mosaic is not entirely clear and may or may not refer to Constantine's victory over his rival Licinius in 324. Its language and sentiments, however, were to be echoed in several later important Roman contexts.[74] Over time, the imperial presence in St Peter's was overlain by a papal one, but the Constantinian mosaics were consistently to have a major influence on church decoration in Rome, most notably evoked in the eighth/ninth century by Pope Leo III in the mosaics in his Triclinium at the papal church of the Lateran.[75]

The third great basilica church was S. Croce. In contrast to both the Lateran and St Peter's, it was not built from scratch but was installed in the already existing hall of the vast imperial palace or villa complex belonging to Helena, Constantine's mother, of which it formed a part. It too contained mosaics; they have long since disappeared and are known only from accounts and sketches.[76] S. Croce housed relics from the Holy Land, including a part of the True Cross and was – initially at least – one of the great pilgrimage churches of Rome.

These really were big churches. It has been calculated that St Peter's could hold 9,000, the Lateran 5,483, the fifth-century basilica of S. Maria Maggiore 2,732.[77] They became social centres for the faithful, the place where they could witness the pope in action and be involved in the celebration of the Mass. It was no wonder that they were renewed time and again and that most, if not all, popes were concerned for their maintenance.

Although it is often noted that Constantine built his churches away from the traditional heart of the city, notably the Forum area, so as not to antagonise the traditions of the Roman (pagan) aristocracy, at the scale on which he was building, he needed more space than was available to him there. In any case the internal geography of Rome had been shifting over time away from the Forum. All three churches occupied areas close to city gates or cemeteries that could

expect considerable numbers of people to pass through.[78] The patronage, size and magnificence of these three basilica churches gave them considerable significance and presence within the city, creating three new focal points for and in Christian Rome.[79] The Lateran was (and remains) the cathedral church of the city and stands on the junction of three major roads. Constantine had a baptistery (also mosaicked) built next to it and it became the residence of the bishop of Rome. St Peter's was the burial place of the city's first bishop and founder of the Christian church, the saint assigned authority by Christ, authority transferred to Peter's successors. S. Croce housed sacred relics of Christ's Passion; soil from Jerusalem was scattered on its floor, making it a piece of the Holy City in Rome.

Smaller churches from the Constantinian period were also built in funerary precincts and catacombs. These include S. Paolo *fuori le mura*, SS. Marcellino e Pietro, the Basilica Apostolorum (S. Sebastiano) on the Appian Way and S. Lorenzo *fuori le mura*, which was smaller than the Lateran, but not by much. Whether these churches also contained mosaic we do not know. It was highly probable, for all are known to have been lavishly furnished and decorated with expensive marbles, so there is no reason that the decoration, on the model of Constantine's big three, could not have extended to mosaic also. When in *c.* 383, the emperors Theodosios, Valentinian II and Arkadios began the rebuilding of S. Paolo *fuori le mura*, on the site of the supposed death and grave of St Paul, they turned it into the biggest church in Rome until the rebuilding of St Peter's in the sixteenth century. It was over 128 metres long and 65 metres wide, and was presumably as, if not more, elaborately decorated than St Peter's. Prudentius, who visited it in the late fourth century, noted glass mosaic with floral motifs in the jambs of the arches and windows; it is improbable that these were the only areas of mosaic. It is likely that there was a mosaic in the apse and on the triumphal arch, one that may have had a theme of the people of Rome as the people of God.[80] That in the apse now is thirteenth century; those of the triumphal arch were replaced by Galla Placidia in the mid-fifth century, restoring those destroyed in a fire. S. Paolo was another pilgrim church, another basilica, and, located outside the city walls, another building that changed the urban geography of Rome.

Imperial patronage made a huge difference to the Christian Church, effectively funding church building on this scale. The *Liber Pontificalis* indicates that Constantine provided 3.7 tonnes of silver and 300 kg of gold to Roman churches, whilst the bishop of Rome could only manage 55 kg of silver and a third of a kilo of gold.[81] These figures highlight the disparity between imperial resources and those of the church in the early fourth century; they also show how much the emperor was prepared to put into Christian Rome. However, imperial contributions were surely not only monetary but must have included access to imperial quarries, workshops, ships, all elements involved in the materials and logistics of building.

Where the emperors paved the way, bishops (and later, popes) followed. Through his edicts, Constantine seems to have actively encouraged bishops throughout the empire to take on the task of building suitable churches, urging them to build and not count the cost.[82] Christianity needed to match the existing buildings of the empire, secular or religious, and church building became a key part of imperial building plans, whilst the role of bishops and churchmen as builders was to become one of increasing significance. And although at first it seems that churchmen took the lead in church building, it is also clear that wealthy private individuals took a hand in church building and mosaic-making.[83] Gradually through the fourth and fifth centuries,

Rome developed a girdle of commemorative churches built outside the city over the tombs of martyrs. Within the city, *tituli* churches – effectively parish churches in function, though dioceses as such did not exist – were built in increasing numbers: eighteen are recorded in the fourth century, twenty-six in the fifth.[84] Five are specifically associated with Pope Damasus (366–84); another with Pope Anastasius (399–402). The problem is that almost all now no longer exist or have been seriously rebuilt so it is impossible to know whether or not they contained mosaic. They may have done, if papal resources stretched that far. The shift to papal and private foundations in the fourth century probably made all the difference to Rome, for in 330 Constantine moved away from the city and created his new capital, Constantinople. Whilst Rome remained hugely important in many ways, from then on the governance and the political focus of the empire shifted east.

The earliest surviving church (as opposed to mausoleum) apse mosaic in Rome comes from one of these non-imperial *tituli* churches, that of S. Pudenziana. This church is said to be one of the oldest sites of Christian worship in Rome. It was believed to have been the house of that Pudens who sheltered St Peter and to whom St Paul referred in his second Letter to Timothy; its dedication is to one of Pudens' two daughters, Pudentiana, sister of the Praxedis we shall encounter in the ninth-century church of the same name about 500 metres away. S. Pudenziana was certainly built over a second-century house, perhaps during the pontificate of Pius I (140–55), reusing part of the baths, and the church, and its buildings were used as the headquarters of the bishop of Rome until the creation of the Lateran as an episcopal residence. At some point in the fourth century, the building was transformed into a three-aisled basilica church and the central apse was mosaicked. The date of this is unclear but it is usually placed between *c.* 390 and *c.* 415.[85]

The contrast with S. Costanza is striking. Where the scenes in Constantina's mausoleum are all relatively small in scale and strike resonances with floor mosaics, decorous almost and sparing in their use of glass and gold, the large apse mosaic in S. Pudenziana, even in its current state, is unmistakably bold, vivid and glittering. The apse has been altered and the mosaic heavily restored, but it is recognisably still a Late Antique scene (Fig. 65). Dressed in gold and seated in the centre among his apostles, a bearded and heavy-set Christ dominates the scene, holding an open book with the inscription '[I am] the Lord, the preserver of the church of Pudentiana.' Peter and Paul are immediately recognisable to Christ's left and right respectively. They are in the process of being crowned with wreaths by two women. The setting is a cityscape with porticoes, basilicas and temples, and, in the sky above, an enormous jewelled cross is flanked by the four Beasts of the Apocalypse taken from the Book of Revelation, figures increasingly associated with the evangelists, and a mass of fluffy pink and blue clouds.[86] A sixteenth-century drawing indicates that there was once a further register below the apostles depicting a dove swooping down on a lamb (representing Christ, the Lamb of God) at the centre on a hill with the four rivers of paradise below, and conceivably six sheep on either side trotting towards the lamb. The image of Christ with a book derives from the sorts of image used in the period to show a teacher among his disciples or the philosopher and his class or a group of nobles, as well as the divinity of Jupiter, Best and Greatest, but the mosaic itself holds multiple meanings. There are eschatological resonances of the Second Coming: Christ enthroned amid the splendours of the New Jerusalem, framed by the Apocalyptic Beasts. Viewers could take the cross as a reference to Christ's sacrifice and to the salvation of the world. The cityscape has been said to resemble that of both Rome and Jerusalem; the cross is reminiscent of Golgotha



Figure 65 Apse mosaic, S. Pudenziana, Rome, fourth–fifth century. This picture was taken from the gallery, and so on a level with the mosaic. Christ is at the centre, flanked by the apostles and with the Beasts of the Apocalypse or symbols of the evangelists in the sky above him, either side of the great golden cross. Among the more obvious areas of restoration are the woman on the right-hand side in gold and green and the group of apostles on the same side.

but also the great gemmed cross given by Constantine to the Church of the Anastasis in Jerusalem; the women may signify the 'church of the Gentiles' championed by Paul and the 'church of the Jews' looked after by Peter; the relationship between Peter and Paul is interesting, with Paul on the more important side, Christ's right hand. Christ himself may or may not have evoked imperial connotations through his rich gold (but not imperial purple) robe; the golden robe most certainly reminded viewers of his divinity.[87] His enormous throne suggests the throne of Jupiter Maximus. Whatever way this scene was read, it was one of Christian triumph on a vast scale, one that placed Christ at the centre of whatever was taking place, and its complexity and multivalency go some way to indicate the sophistication of Christian imagery in this period. This is a different focus from the Christian imagery of the catacombs and of mausolea such as S. Costanza or Centcelles, where so much more emphasis was on salvation and the afterlife. This is an image in a church used for worship and the celebration of the liturgy: the acts of the Roman synod of 499 called by Pope Symmachus make it clear that the administration of the sacraments was allowed in S. Pudenziana. It served as the focal point of the church and of church ritual, and offered the worshipper an image of God.

Although Rome has the greatest concentration of surviving fourth-century mosaics, perhaps emphasising its pre-eminence in the tradition of using the medium, traces of episcopal wall



Figure 66 Baptistery, S. Giovanni in Fonte, Naples Cathedral, fourth–fifth century. At the crown of the vault is the Chi-Rho with an alpha and omega dangling from it, a sign of Christ; below, Christ perched precariously on a globe hands the New Law to Peter. To the left is a scene of the Wedding at Cana and to the right, the miracle of the Draught of Fishes. Below are deer drinking from the rivers of paradise, lambs and assorted saints.

mosaics have survived from several key imperial sites such as Trier, Ravenna and Milan, all at different times capitals of the empire. In Milan, beyond S. Aquilino itself, we have no evidence as to whether the eighteen plus other churches in the city also had mosaics. The exact date, function and patron of the chapel of S. Aquilino, attached to the church of S. Lorenzo Maggiore, is unknown.[88] S. Lorenzo Maggiore itself is a quatrefoil main church surrounded by three centralised chapels, S. Aquilino, S. Ippolito and S. Sisto, and the whole complex was almost certainly lavishly decorated with marbles and mosaics. The surviving S. Aquilino mosaics are in the vestibule. They consist of two registers of standing figures with inscriptions: the lower represent the Twelve Tribes of Israel; the upper the twelve apostles. There were probably martyr saints on the side walls, though these may have been later. In the rotunda, two mosaics survive: the conch of the south-west niche depicts Christ, looking like a classical philosopher, presenting the laws to the assembled apostles; the conch on the south-east has a scene which has been variously interpreted as the Ascension of Elijah on the Fiery Chariot or, possibly, Christ-Helios, as in the St Peter's necropolis.[89] There are echoes of S. Costanza, and, as in that building, the gap between Christian and pagan iconography is not as wide as some might like it to be: in S. Aquilino, both Elijah and the putti alike ride in chariots. Like S. Costanza, S. Aquilino may have been a mausoleum, perhaps that of the Emperor Gratian, possibly that of Valentinian I, and its

surviving mosaic decoration fits the mausoleum theme.[90] Its patron, however, may have been either Bishop Auxentius (355–74) or Bishop Ambrose (374–97), with the latter frequently seen as the more likely, though this may simply be because he is the better known.[91]

In other Italian cities, the surviving mosaics are, like S. Aquilino, connected with bishops rather than emperors. In Naples, the Baptistery of S. Giovanni in Fonte is associated with Bishop Severus (d. 409) and its mosaics are dated to somewhere in the late fourth century, perhaps even as late as 400. The dome of S. Giovanni (Fig. 66) contains New Testament scenes, symbolic Christian images such as the *Traditio Legis*, the evangelists, shown through their symbols, scenes of shepherds with sheep and deer, a phoenix, and a Christogram set in a starry sky in the centre in the form of a Chi-Rho with an alpha and an omega hanging off it.[92] The increase in bishops' seats between the fourth and sixth centuries was considerable and we can only wonder how many of the new churches contained mosaic.[93] In Aquileia, scatters of tesserae suggest the presence of wall mosaics; in Ravenna, later mosaics replaced the fourth-century ones in the cathedral.

THE EASTERN EMPIRE

In the East, material is much scarcer. Whether, when he moved the capital of the empire from Rome to Constantinople in *c.* 330, Constantine took both church building and wall mosaic with him is unknown: both may have already existed in the city. Overall, there do not seem to have been many churches in fourth-century Constantinople: the *Notitia dignitatum* (dated to 430), for example, lists only fourteen.[94] It is also unclear what churches Constantine himself founded and decorated in his new city. Of the major churches of the city, Hagia Sophia was actually consecrated in 360 by Constantius II. There is very little evidence for the plan of this church, though it seems to have been a basilica, and almost none for its decoration, though it is highly plausible that it contained mosaic, since it was one of the most important churches of Constantinople and imitated the important imperial churches of Rome in its plan.[95] Similarly there is nothing to say whether the original churches of Hagia Eirene and the Holy Apostles, also most probably the work of Constantius, contained fourth-century mosaic, though it is again credible, given their importance in the city. The Mausoleum of Constantine at the Holy Apostles was said to have had a ceiling coffered and overlaid with gold, which may mean that gold mosaic was used.[96] Given the use of mosaic at S. Costanza and Centcelles, it seems likely. Mosaic may also have been used in the Constantinian buildings in the Holy Land: the basilical Church over the Sepulchre and the rotunda Church of the Anastasis in Jerusalem; and the Church of the Nativity in Bethlehem. These were buildings with imperial sponsorship and, given that mosaics were part and parcel of the great imperial foundations of Rome, there seems no reason for them not to have been used here. But we cannot make assumptions and Eusebios, who described Constantine's churches, does not tell us.

Only in Thessaloniki in northern Greece is there any surviving wall mosaic in situ, in the Rotunda, also known as the Church of St George, and both the building and mosaic present us with a series of problems. Christianity had been brought to Thessaloniki by St Paul, and in the fourth century the city was an important bishopric under the jurisdiction of Rome. Strategically, the city sat across the major land and sea transport arteries between Rome and Constantinople. Thessaloniki was one of those cities that served as an imperial capital in the late third and early fourth centuries. It served as

a base for Galerius (293–311), Diocletian's Caesar and later his successor as senior emperor in the Tetrarchy; Constantine also employed it very briefly as his headquarters. Theodosios I used it as his capital in the late 380s; the most notable event came in 390, when the population of the city rioted against the barbarian Goths installed as a garrison there, and Theodosios punished them so severely that he was forced to do penance for this by Ambrose, bishop of Milan. But which of the two – if either – commissioned the mosaics, if fourth century they are, is obscure.

The Rotunda presents several mosaic puzzles. It is a simple but huge architectural structure, a massive cylinder – the walls are 6.3 metres thick and the interior diameter 24.15 metres – pierced by eight bays and with a dome on top, with an interior height of 29.8 metres. Below the dome but above the eight bays are eight huge windows, with a further nine semi-circular lunettes at the base of the dome, making the building surprisingly light and airy. The edifice was originally built as part of the palace complex of Galerius (emperor 305–11), though its function there is unclear. It was not his mausoleum: he was buried at his birthplace of Romuliana (modern Gamzigrad). At some point, presumably in the fourth (or possibly fifth) century, the Rotunda was converted into a church through a series of architectural manoeuvres, including the extension of the eastern bay into an apse and the addition of an ambulatory, into which the remaining seven bays opened (these are now blocked).[97] The walls were covered, from floor to dome level, with marble sheets, reflecting light. Mosaics survive in the drum, the dome and the vaults of the recesses (Fig. 67). Whether other areas of the building were mosaicked is unknown; a sixteenth-century source suggests that there were mosaics on the exterior.[98]

It is generally taken as a given that the mosaics were installed at the same time as the conversion of the building, since Galerius was, for most of his reign, renowned as a persecutor of Christians.[99] However, since we do not know when the building was adapted, this means that the mosaics have been dated at almost any point from the fourth century to as late as the seventh or eighth century.[100] The use of gold in the mosaics implies a very wealthy patron and the nature of the Rotunda as an imperial residence transformed into a church suggests very strongly that the patron was an emperor, or at least someone powerful enough to use part of the imperial palace in this way. It is on this basis that the argument that the building was converted in the late fourth century, with its patron the Emperor Theodosios I (379–95), has been made, specifically dating the work to between 379 and 380 while he was briefly resident in the city.[101] If so, it is unlikely that he ever saw the extensive work completed. But a range of possible imperial patrons have been mooted, from Constantine (the proposal being it was meant as his mausoleum) to Galla Placidia (who spent some time in the city).[102] The mosaics occupy an area of perhaps some 1,414 square metres; whether they were completed in one campaign (probably a long one) and by the same team, however large that was, or over a period of time is, like everything else about them, disputed.[103]

The iconography of the programme is both straightforward and complicated and – at least to us – unclear and contentious in its meaning. There were three levels. At the lowest level in the drum, eight equal-sized panels, separated by vertical bands with plant motifs of gold, black and silver, are occupied by seventeen (originally twenty) praying male figures standing in pairs against a fantastic – in every sense of that word – background of gold architectural features, gemmed arcades, peacock-feathered conches and elaborate ciboria, altars and thrones (Fig. 68). The men themselves are gorgeously clad in elaborate robes, cunningly made to suggest shot-silk and to hint at the physical bodies swathed in



Figure 67 View of the mosaics of the Rotunda (Hosios Georgios), Thessaloniki, fourth century. In the huge space of the building, the golden architecture shines out but the saints are less visible. The mosaic patternings of the ground-level barrel vaults are also visible.

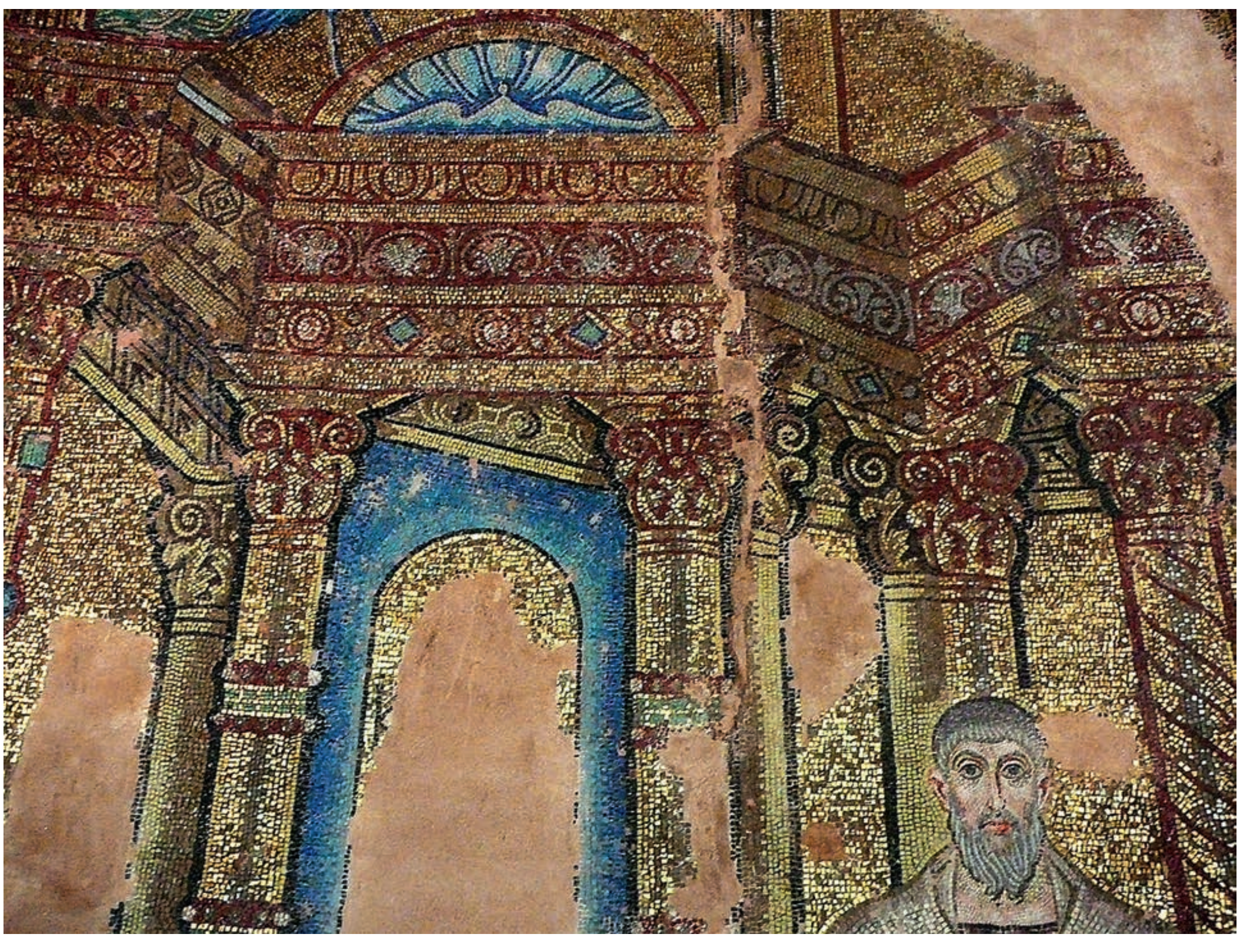


Figure 68 A detail of the fantastic and fantastical architecture and the head of St Cosmas, south-west panel of the mosaics of the Rotunda (Hosios Georgios), Thessaloniki, fourth century.



Figure 69 The soldier-saint Onesiphoros, wearing a splendid robe of white and silver with a wonderful blue and purple chequerboarded tablion: south panel of the mosaics of the Rotunda (Hosios Georgios), Thessaloniki, fourth century.

these garments; their faces are subtly individualised (Fig. 69). Although the figures have inscriptions with their names, months of the year and, in some cases, a mention of a civic status and a profession (for example, the third panel to the south-west notes Damian, 'physician month of September', the seventh panel to the north-east, Therinos, 'soldier month of July'), it is unclear exactly who they are, why they were paired as they are and associated with specific months, how the ordering should be read and why this group of men was selected. Various meanings have been offered. The men may be saints or donors.[104] They may have been shown because their relics may have been in the crypt below the church. They may have been picked because all are 'Eastern' saints with no apparent link to Rome or Italy, and they are perhaps arrayed as an imperial bodyguard protecting the east. They could all have had a special significance for Thessaloniki. All of these interpretations have some merit, but none is ultimately convincing as The Solution that the level of organisation and detail around the figures suggests should exist.

Above the men, at the next level, only feet, garment edges, shadows and short grass survive, suggesting the presence of some twenty four to thirty six figures, perhaps apostles and friends, perhaps the Elders before the Throne of God. In the dome itself, although again only fragments remain, it seems likely that a standing Christ was

at the centre, inside a blue border of gold stars, a garland of fruit and plants, and a wonderful rainbow border, supported or venerated by four flying angels, and accompanied by a phoenix. Whether he was ascending or descending at the Second Coming is unclear; possibly both were deliberately implied.[105] In the vaults of the recesses, elaborate glass mosaics in gold and silver, with geometrical motifs enclosing birds and fruit, create a carpet effect richer and more intricate than at S. Costanza. How the whole schema should be interpreted is as uncertain as our understanding of the saints. Is this a representation of the New Jerusalem? An apocalyptic image? Heaven on earth? Do the scenes relate to the religious ceremonies celebrated in the church below? Did it have a specific meaning for the citizens of Thessaloniki? Was there an imperial message, with Christ shown as a sort of emperor flanked by his bodyguards?[106]

Parts of the composition are similar to imagery found elsewhere in Late Antique art. The decorative motifs on the niches and the patterns in the barrel vaults and lunettes evoke floor mosaics.[107] The use of standing figures in ceremonial dress and architectural details are both familiar elements of Late Roman painting: the paintings of the tetrarchs in the Temple of Amun in Luxor, converted for use as a military base by Diocletian, show the tetrarchs themselves, hieratically frontal, rank appropriately signalled through dress and insignia; at Trier, in what may have been part of the imperial palace, single standing figures are depicted between illusionistic pilasters.[108] If the dome did hold an apocalyptic vision of Christ, that would not be a surprise, for elements of such visions were used time and again in Early Christian art, in the mosaic of the Catacomb of Domitilla, for example, where Christ is in an aureole of green light, or with the Beasts of S. Pudenziana. But at the same time, both as a whole and in detail, the Rotunda is totally unlike anything else surviving in mosaic: the rows of standing paired saints and the phoenix in the dome (only the head survives) are two examples that underline its unusual status.

The mosaics are technically superb. The architectural features of the lowest level create the sense of an octagon within the rounded drum of the dome, and inside that four different architectural variations are shown in mosaic: north, south, east and west repeat each other; as do north-west and south-west. These shallow architectural façades are strongly reminiscent of Roman wall paintings and hint at the presence of massive fictive buildings behind. In contrast to fourth- and even fifth-century mosaics in Italy, such as S. Costanza or S. Maria Maggiore, both in Rome, or even to the 'Mausoleum' of Galla Placidia in Ravenna, in the Rotunda heads tend to be modelled using the chequerboard technique of alternating light and dark cubes (apparent in Fig. 69). Details such as the modelling of clothing to create a sense of transparency and the swan friezes set into the pediments of the imaginary architecture suggest the work of very skilled artists with a close control of the medium. The tesserae are generally very finely set, close together and with few visible interstices.[109] Huge sheets of gold were employed as backgrounds: this survives at the lowest level in the architecture and was probably used throughout the dome. Silver is also found, most notably in the arch of the south conch, which has a huge gold cross on a silver background filled with stars, birds, flowers and fruits (reminiscent in many ways of a floor mosaic translated to the ceiling in shining light). In daytime, the mosaics manage to shimmer in natural light. The windows are placed below the level of the dome and the sills deflect light upwards.[110] The colours of the tesserae are also used cleverly. Those in the barrel vaults of the bays are different from those in lunettes. The poorly lit bays have bright colours: dark reds, greens and blues on gold or silver grounds. In the well-lit lunettes, softer, lighter colours were

used: light greens, greenish yellows, pinks, on a white marble ground. It is clear that these mosaics represent a coherent, structured and planned work of art carried out by artists who knew very well what they were about.

Where the artists came from is a puzzle. Although there was clearly an established tradition of mosaic-making in Italy in the fifth century, particularly in Rome, the mosaics of the Rotunda do not look very like those that survive from Rome and from fifth-century Ravenna. This may be a difference of scale: we have lost the mosaics of the Lateran and St Peter's, for example. But it may also reflect Roman mosaicists working in a different way from the material that survives. The mosaicists may have been from Constantinople, because of its relative nearness and status as an imperial city, but the lack of material from that city makes this impossible to prove or disprove. Thessaloniki itself may well have supported a mosaic-making industry, perhaps dating back to Galerius. We know of other fourth-century mosaics in both the city and the region. A martyrium site with traces of mosaic has been excavated in Thessaloniki itself, and evidence for the use of wall mosaics comes from the towns of Nea Kallikratia and Amphipolis.[111] The expertise for tesserae production could well have existed locally. Although it is unclear whether raw glass was made locally, the import of raw glass from the Levant or anywhere else to Thessaloniki would not have been a problem; the city also had a thriving secondary glass-making industry.[112]

So the Rotunda's mosaics present us with problems at every turn: date; iconography; patron; materials; artists. The fact that the original function of the building in the reign of Galerius is unknown does not help. Nor is it clear what the Rotunda's place as a church in Thessaloniki might have been: its conversion and the installation of the mosaics was not a small project, yet no emperor took Thessaloniki as his capital after Galerius. Does this suggest that the use of mosaic was on a wider scale than we have imagined?

MOSAICS AND THE USE OF ART IN CHURCHES

What the mosaics of the Rotunda and S. Pudenziana do show, however, is that Christian mosaic art was well on the way to developing a full repertory of scenes and depictions, many shared with other media, but combined together for a different purpose. The question of the development of Christian art and of why many Christians wanted to put art into churches is a huge one that I cannot do justice to here. The place of mosaics in Christian art is, however, worth consideration at this point. As this book unfolds, there are many points where Christian conflicts over theological issues will be played out in part through images, including mosaics, and so it is worth taking a little time to touch on some of the recurring issues.

Generally, in the fourth century, the lines between 'pagan' and 'Christian' were less clear and defined than either we expect or the Church Fathers, who had an investment in the debate, suggest.[113] Like Christian art in other media, Christian mosaic art continued to share motifs and decorative elements such as vines and plant scrolls, animals and birds, and ornament found in non-Christian mosaics. Their Christian context allowed them to be seen differently: the vine filled with grape-gathering putti and suggesting the worship of Bacchus in S. Costanza was also the True Vine of the Christian faith, Christ himself. This assimilation of relevant artistic vocabulary made it familiar to craftsmen and audience alike.[114] Imperial mausolea and indeed images in the catacombs were what might be termed 'private' art, art meant for a limited and specific audience, and art with a very specific set of

themes, revolving around salvation. In contrast, the mosaics in the apses of churches were very public statements, sometimes aniconic and weaving together a variety of themes – salvation, biblical history and eschatology. Such Christian monumental mosaics were increasingly visible and spectacular images, ones that asserted Christian power and magnificence in public spaces. Their scale – at S. Pudenziana, the seated Christ is at least 2 metres high – and bewildering and bedazzling effect surely created a sense of the might and glory of the Christian God.[115] The mosaics in the apse in particular became focal points in the building, behind the altar, vast backdrops to the performance of the Christian liturgy, above all the celebration of the Eucharist.

The question of why and how images developed in apses is one that has concerned scholars. It is unlikely that it was either a coherent or a conscious developmental process.[116] In the Roman world, statues of the divinity could be displayed in front of an apse, decorated in paint, mosaic, stucco or even coffered.[117] This may be why Constantine erected a *fastigium* in the Lateran Church with its life-sized statues of Christ and the apostles. However, three-dimensional statuary was not a favoured art form for Christians, as it both evoked pagan cult images and was in blatant disregard of the Second Commandment. Even in the fourth century, there were debates about the validity of images of Christ and his saints, and Constantine's statues were not copied elsewhere. In this context, mosaics have been understood as a Christian alternative to three-dimensional statuary, a part of the development of the apse from a Roman cult chamber with a statue to a precinct lined with mosaic with an altar at the centre.[118] In addition, despite concerns about the validity of pictures, Christians seem always to have wanted to imagine and image Christ, to fill in the bits of his story that the (increasingly) canonical Gospels did not tell. The words put into the mouth of an anonymous woman underlie the development of Christian art: 'How can I worship him [Christ], when he is not visible and I do not know him?'[119] She was lucky: in response, a miraculous representation of Christ was created specifically for her. But her question was answered in various ways, for there was considerable deviation in how Christ was imagined and portrayed in this early period: the bearded and beardless versions in S. Costanza being two ends of the scale. He might be shown as emperor, philosopher, child or god, or all of these; in Thomas Mathews' happy phrase, Christ Chameleon.[120] Once imaged, as the woman had claimed, he was known, he existed. This depiction may have shaded off into images that engaged with questions about the relationship of the Father and the Son (the heretical version of Christian theology labelled by the winners as Arianism) or images that sought to establish the possibility of portraying the nature or natures of Christ as human, divine or both, but the bottom line, if such is sought, was what the images said about salvation.

In terms of coherence, given the shortage of surviving material, it is unsurprising that it has proved impossible to trace a single theme or linear development underpinning the apse mosaics of the fourth and fifth centuries. A mixture is apparent, changing through time, affected most likely by different patronal wishes, Christian desires and theological debates. At the Lateran, Christ may have been shown amongst his apostles; He was shown in his glory and divinity at St Peter's (seated on the globe of the world and handing out the New Law) and at S. Pudenziana (where he is joined by the apostles and the Second Coming is also hinted at). His divinity mattered but, as we shall see in the fifth century, so too did his humanity. The presence of the emperor on the triumphal arch at St Peter's placed him in a central position, setting a precedent that was to be regularly echoed.

The surviving material is not enough to allow us to trace any sort of 'development' of a 'programme' for the imagery used in apses in Christian churches. What survive are better understood as types rather than prototypes, and both how scenes were chosen and how it was decided how to depict those scenes was an ongoing process, affected by individuals as much as by doctrine. There is no evidence of Church Councils from this period discussing suitable themes, so it seems more likely that the subject matter came from the needs of those commissioning the work, and that it varied by function: the images suitable for a mausoleum might not be identical to those in a large imperial church. These are the themes that I will pick up on and develop in more detail in the next chapter.

But to conclude the fourth century. It was once assumed that wall and vault mosaics were not used, or at least not much used, in the ancient world before their employment in the great church buildings of the fourth century AD.[121] However, it is clear that wall mosaics were in existence by the first century BC and probably even earlier. The major Christian wall mosaics of the fourth century took an established form of art and extended its scope. This was probably a consequence of the use of mosaic by emperors for major building projects and within imperial mausolea. When looking for a means of decorating a church, mosaic, alongside marble wall revetments, paint, stucco and a lavish use of precious materials – all conventional – took its unquestioned place. By the fourth century, wall mosaics were very much an established form of art. They were sophisticated in technique: mosaicists clearly had a good idea of what the medium allowed them to achieve and what worked well. Their iconographic repertoire was well developed, borrowing from other media and traditions in Roman art: it employed motifs such as fruit garlands, ribbons and Greek key patterns found in floor mosaics. Other parts of the repertoire were a fusion of Christian and non-Christian iconographic elements in both Christian and non-Christian use.

It is also apparent that wall mosaics were used in secular and religious (both Christian and non-Christian) contexts. Much of what survives comes from politically and/or religiously important locations: major churches; palaces; imperial and aristocratic commissions. It was a prestigious medium, used with marbles and expensive fixtures and fittings as a way of expressing the status of a building. However, there is also some evidence of mosaic being used in smaller, less obviously significant settings, where clearly patrons felt it was an appropriate medium in which to celebrate God. As a medium, it also continued to be used in nymphaea and fountains, baths and Mithraea, but it became increasingly prominent in palaces and mausolea. In the fourth century, it became a significant medium in the decoration of churches, seemingly both large and expensive ones and smaller, less glamorous foundations. This expansion may have been the result of imperial use and patronage but wall mosaics, even in churches, were never the exclusive preserve of the emperors. However, a case can be made that wall mosaic was initially very much a Roman art form. While there may have been a series of workshops in major cities such as Constantinople, Milan and Trier, the surviving evidence implies that if one centre did exist, that was probably Rome. But mosaic was reasonably widespread as a medium in the fourth century, not limited to any one city or area of the empire, and this suggests that the resources, logistics and artists were not confined to Rome. It is now impossible to establish where mosaic workshops may have been or how production was organised, but surviving mosaics come from sites (imperial or episcopal churches) that indicate they were made by expert craftsmen who knew what they were doing: in contrast, we can only wonder who the artists for the small anonymous church in Çiftlik may have been.

One implication of considering Rome as a centre of wall mosaic production is the possibility that, when it was used elsewhere, it suggested *romanitas*, Roman-ness, a display of Roman identity and culture. Often an imperial medium, increasingly, too, it became an imperial Christian medium. Constantine's conversion, although it did not make Christianity the established religion of the empire, gave it a new prominence which meant that the Christian faith needed to be given appropriate status. Large expensive public churches adorned in marbles and mosaics helped create this impression, and also reflected a proper attitude to God, underlining the importance, and indeed dominance, of the God of the Christians among the other deities of the empire.

In the fourth century Rome continue to be the city of choice for the highest aristocracy, who continued to build there. However, increasingly imperial power and authority moved away from the city. In the West, in contrast to the East, various favoured residencies were used by the imperial court rather than one stable capital; emperors moved about between trouble spots on their borders and spent relatively little time in Rome.[122] Significantly, not one of the Councils of the Church held in the fourth century took place in Rome. Still, Rome remained an immensely rich city, the largest in the Late Antique world, with perhaps half a million inhabitants. But Constantine's move to Constantinople continued a process that had begun in the third century, that of focusing the empire in other cities. This move was the critical one, for Rome became slowly but increasingly less of an imperial city and more of a Christian city. At first, the wealth of the Church was as nothing compared to that of the great aristocratic families but that imbalance did not last forever. As the story of mosaics unfolds, with it unfolds the story of Rome and Christianity as key elements among the narratives connecting its spread.

Chapter 6

TYPES OR PROTOTYPES? MOSAICS IN THE FIFTH CENTURY

The previous chapter started with a private imperial building, a mausoleum, and its mosaics. This one opens with what was a relatively common Christian building, a baptistery (Fig. 70), the octagonal Baptistery at Albenga in Liguria (north-west Italy), and its mosaic.[1] Here, in the centre of the vault of the apse arch, is a jewelled Chi-Rho cross radiating light and placed on a blue background, with twelve doves around it, and rows of stars below; in a lunette, sheep stand either side of another jewelled cross with an alpha and an omega hanging from it (Fig. 71). The inscription on the front of the arch gives the names of those saints whose relics were present in the church: Stephen; John the Evangelist; Laurence; Navoris; Protasus; Felicis; and Gervasus.[2]

The date of the mosaic is not known: it has been put almost anywhere in the fifth and early sixth centuries, thanks to its similarities with other fifth-century mosaics, most notably the vault of the so-called 'Mausoleum' of Galla Placidia in Ravenna (*c.* 430) and the mosaics of S. Vittore in Ciel d'Oro in the basilica of S. Ambrogio in Milan. However, the amphorae used in the construction of the roof suggest that this dates to the last quarter of the fifth century, and what is true for the roof may also be the case for the mosaics.[3] What the images used at Albenga 'meant' is also ambiguous. The two jewelled crosses perhaps represented Christ. One has a Chi-Rho, the first letters of his name in Greek, the other an A and Ω dangling from it, the first and last letters of the Greek alphabet and a reference to the lines in the Book of Revelation (22.13) about the Second Coming of Christ: 'I am Alpha and Omega, the Beginning and the End.' The twelve birds through their number reminded the viewer of the twelve apostles. The sheep and the stars too can be given Christian interpretations: the righteous sheep separated from the goats (Matthew 25:32); the stars



Figure 70 View into the baptistery, Albenga, fifth century.

representing the saved, shining like stars (Philippians 2:15; Daniel 12:3), so making a reference to salvation through Christ and to his Coming at the Last Judgement to sort the just from the unjust. Both are likewise important themes related to baptism, which welcomed believers into the church, putting them on the side of the saved sheep by washing them clean of their sins. Even the architectural form of this building was potentially meaningful: St Ambrose had interpreted the eight sides as matching the eight days of creation, rest and resurrection.[4]

But an octagonal baptistery, often freestanding, with or without mosaics, was not in itself an unusual phenomenon. Baptisteries were fundamental buildings for welcoming believers into the Christian fold. At least thirty are known from Italian contexts.[5] I have already mentioned the Baptistery of the Cathedral of Naples, S. Giovanni in Fonte. In Milan, the octagonal fourth-century baptistery, rebuilt in the fifth or sixth century, lies under the cathedral.[6] Several other fifth-century baptisteries are still standing and retain their mosaics: the Lateran Baptistery and its several chapels in Rome; the Orthodox (Neonian) Baptistery in Ravenna, and, a little later, the Arian Baptistery in the same city. Although such baptisteries all share a similar architectural form, they contain a great diversity of mosaic imagery. In S. Giovanni in Naples, on the cusp of the fourth/fifth century, the mosaics contain New Testament scenes, symbolic Christian imagery, and a Chi-Rho with an alpha and omega below set in a starry sky (see Fig. 66). At the Lateran Baptistery, a great acanthus scroll fills the eastern apse conch of the Chapel of SS. Cyprian and Justina (also known as SS. Secunda and Rufina); in the centre is Christ the Lamb; the mosaic of the western apse opposite depicted four shepherds with their sheep. The Chapel of St John the Evangelist in the same Baptistery put the Lamb inside a circular wreath framed with plants and floral garlands (see Figs. 76 and 77). In Ravenna, both baptisteries show processions of saints and apostles around the dome below a roundel showing Christ's Baptism. Five similar buildings; five different sets of mosaics based around the same theme of baptism. These fifth-century octagonal baptisteries indicate something highlighted by fourth- and fifth-century mosaics: variety in their imagery; they are types, not prototypes.

But why was the Albenga baptistery ever mosaicked at all? In purely general practical terms, it made sense. With the amount of water used in total immersion baptisms, mosaic decoration must have served the practical purpose for baptisteries that it did in secular bath houses. But the practicalities are only a part of the story; patrons still had to command resources and feel

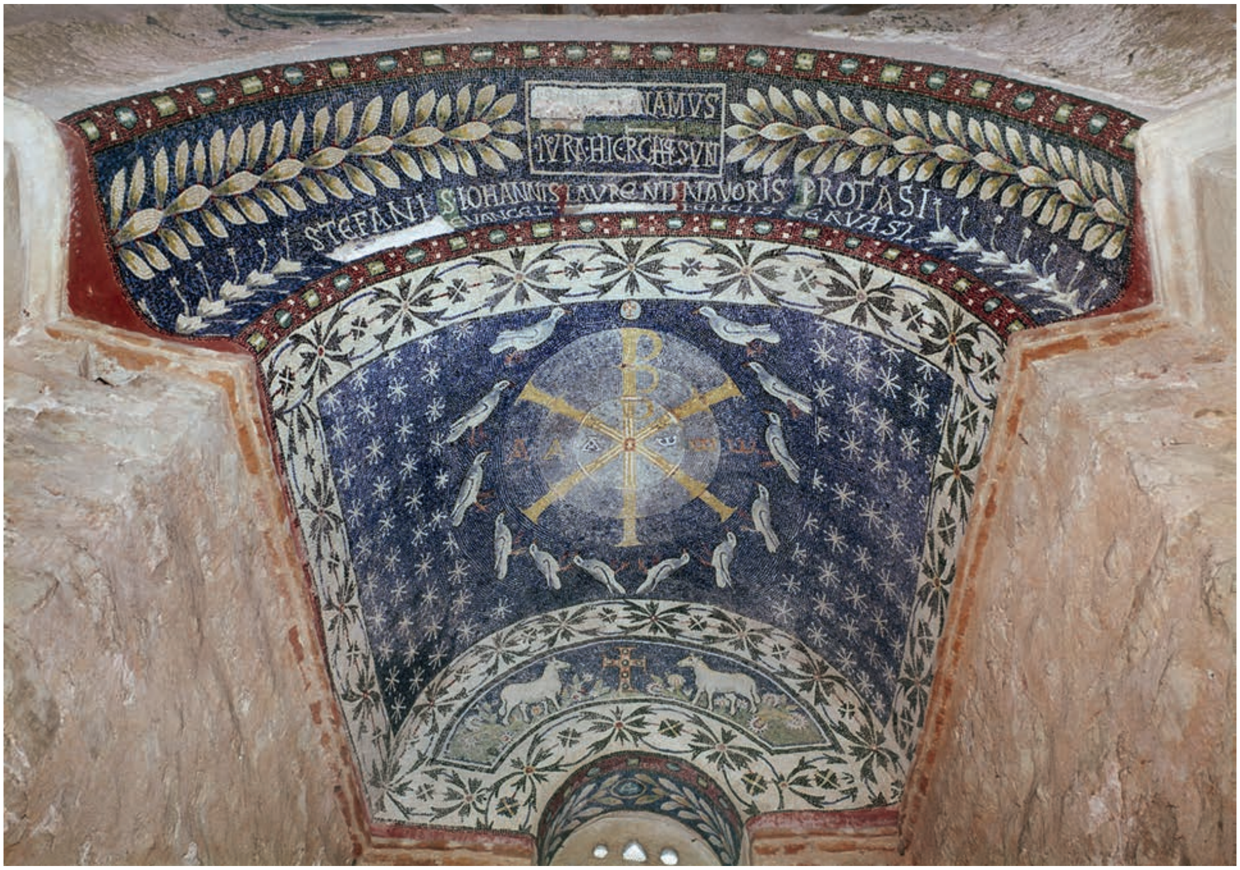


Figure 71 Detail of the mosaic in the vault arch of the baptistery, the Chi-Rho in the centre radiating out in duplicate, the doves around it and the sheep below. In the front are the names of the saints of the church. Albenga, fifth century.

that an investment in mosaic was a worthwhile investment. What the Albenga baptistery and the other examples demonstrate is both that these different Italian cities were clearly able to acquire the medium and that people in those cities thought that, however common baptisteries were, these buildings warranted the expenditure in time and money alike. Albenga itself was a prosperous and important Roman port, sited on the Via Julia Augusta, one of the major land routes to southern France and Spain, and inhabited throughout Late Antiquity. There seems to have been a continuous military presence in the city throughout the period, and this may have made a difference to its survival and success in the turbulent fifth-century history of the Roman Empire. But nothing is known of the patrons of the baptistery and its mosaics. The only known imperial association is with the Western emperor Constantius III, who rebuilt the city walls in 415/16 after attacks from the Visigoths, perhaps a little too early for the baptistery and its mosaic. By 451, the city had a bishop (the baptistery itself continued to be used down to the eighth century at least); he may have been the commissioning force behind it, as was the case in several other examples; alternatively, the impetus could have come from a local wealthy aristocrat.[7] Whichever, it suggests that at Albenga at least a mosaicked baptistery was one of those features perceived as making a Christian city a Christian city, and perhaps a Roman one also, an element of civic pride – a view shared by those thirty or more other such town and city baptisteries in the Italian penisula.

The history of Albenga is not very different from that of many towns in fifth-century Italy. It was only one of many to suffer attacks and be repaired: indeed, in 410, the same fate had befallen Rome itself. Although the third and fourth centuries had been a turbulent period for the Roman Empire as a whole, it had been one in which internecine struggles between emperors seem almost to have taken prominence over threats from outside the frontiers of the empire, the constant pressing menace of barbarian (that is to say non-Roman) invasion, and the internal management of that peril. By the fifth century, those boundaries, both real frontiers and conceptual divisions between Romans and barbarians, had become more porous. Barbarian leaders increasingly held offices in the imperial government, became senators, led armies, negotiated with other barbarians outside the empire. The fifth century also saw the final parting of the ways for the Eastern and Western parts of the empire. In 400, the two sons of Theodosios I ruled in East and West, with little structural difference between them. By 500, although the Eastern Empire continued as a recognisable single entity, claiming descent from Rome but ruled by an emperor from the New Rome of Constantinople, the Western Empire had gradually fragmented into a collection of increasing autonomous units whose boundaries fluctuated as rulers came and went. These kingdoms were progressively militarised societies in which the rulers held on to power through retaining the loyalty of their followers but where many Roman traditions of rule continued. Albenga was one of these cities, hit by barbarian invasion but still recognisably Roman, though by the seventh century it was a part of the Lombard kingdom. For such places, now in the fifth century, if ever, was a moment to hold onto their Romanness: using mosaic was perhaps one element in this.

Traditionally, Roman commitment to political life and civilization had been defined by its relationship with cities such as Albenga. On one level, the empire was made up of a network of cities, small and large. Each city had a set of expected municipal buildings, almost a requirement for establishing its status as a proper city: walls; a forum or fora; civic buildings (law courts for example); temples; theatres and amphitheatres; monumental baths; and, from the fourth century, official Christian places of worship – churches and perhaps a cathedral. A commitment to urban politics was a fundamental Roman value, apparent in East and West alike: cities were the bases of the elite, and it is no accident that medieval Italy was dominated by city-states. But beyond this, the Roman world was united by an awareness of a community wider than that of village, city or province, a recognised community of the Roman world.[8] One of the arguments of this chapter is that mosaic served as one of the ways through which towns and cities could demonstrate their *romanitas*, that they were a part of that community, that they could show, as St Paul had claimed, 'Civis Romanus sum': 'I am a Roman citizen.' By this I mean not that the style of a particular mosaic was more or less 'Roman' in its appearance, though style may have a part to play (this is more apparent in the later centuries when there is a deliberate looking back to the past in the use of mosaic), but that the very medium, the use of mosaic, spoke to Rome and the empire, just as using Latin for civic business did.

Mosaic's use in local ecclesiastical buildings like baptisteries also draws attention to the growing wealth of the Church. In the fourth century, Constantine's conversion had not made Christianity the established religion nor undermined the position of the pagan aristocracy in the empire overnight, but it had given a new prominence to the Church and opened the way for

clever bishops, West and East, to gain a foothold in affairs of state. Throughout the fourth and fifth centuries, non-Christians were edged out of the public world and Christian imagery, vocabulary and public practice became increasingly dominant. Numbers of clergy increased dramatically throughout the period, perhaps reaching 100,000, more than those employed in the civil administration.[9] Thanks to pious gifts and donations, the Church also became progressively wealthy and increasingly influential, to the point that by 500 the local cathedral church, and its bishop, was often the richest and largest landowner in a region. Some of this wealth was used on church building and decoration as part of a steady Christianisation of public spaces.

Importantly, because the Church lay outside of imperial structures and imperial government and did not need financial support from the state, it survived the fragmentation of the empire, continuing with less change than any other formal structure of state organisation into the Middle Ages. Especially in Rome, the Church filled something of the void left by the gradual simplification of the Roman Empire. But 'the Church' itself was not really one coherent body with a clear leader. The practice of Christianity developed an increasingly elaborate and hierarchical organisational structure with four major bishops, the patriarchs of Rome, Alexandria, Antioch and Constantinople at the top. Jerusalem was added as a fifth, and further level of competition, in 451. The different patriarchs all strove for leadership, with Rome (the heir of St Peter) and Constantinople, (the seat of imperial government) generally the strongest. Church Councils of the whole Church (though not everyone turned up) served as the meeting point for major doctrinal decision-making, but these decisions were not universally accepted without dispute and even violence. Below the patriarchs were two levels of bishop, metropolitan and provincial, and these bishops in their dioceses had authority over clerics of other churches. In addition, there were an increasing number of privately founded churches and monasteries which were usually autonomous, and these presented a variety of challenges to the official ecclesiastical hierarchy. Bishops seem to have identified themselves with local interests first and foremost and only then more widely with the 'greater church' of their local patriarchate. In this model, Albenga may well have been a significant local church, the commission of those with local power and prestige, and a demonstration of both, given the relative costs of mosaic and paint.

Albenga and the other octagonal baptisteries were not alone as sites for mosaics in fifth-century Italy. Mosaics were employed in large cities, in small towns and at pilgrimage sites, and in a variety of religious buildings. In the south, mosaics at the shrine of St Felix at Nola (Cimitile), close to Naples, date to the early part of the century. They survive in the *aedicola* around the tomb of Felix, built between 484 and 523, and the peacocks and vine scrolling decoration are reminiscent of floor mosaic as much as of other wall mosaics. Nola was a pilgrimage site, well known, thanks to Bishop Paulinus' publicising of his renovations.[10] In Naples itself, as well as the Baptistery, fifth-century mosaics survive in another place of pilgrimage, the catacombs of St Genaro and of St Gaudioso, the burial place of bishops and the elite of Naples until the tenth century.[11] Elsewhere, mosaic fragments remain in the Church of S. Giusto in Lucera (a Christian community from very early on, supposedly founded by St Peter himself and strategic enough to be seen as the key to Puglia) and the small church of S. Maria della Croce Casaranello in Casarano in Apulia, where the vault mosaic strongly resembles floor mosaic.[12] In contrast, in the north, Milan, which had been the administrative centre of the Western Empire in the third and fourth

centuries, seems to have gained few new fifth-century mosaics. The mosaics of the chapel of S. Vittore in Ciel d'Oro in S. Ambrogio seem to post-date the death of Ambrose in 397, and may be fourth or early fifth century. In the centre of the eponymous golden dome, St Victor is depicted in bust form, clutching a cross and a book framed by a floral wreath. Below, a group of saints is depicted on the chapel walls, forming part of a complicated mosaic programme in which the sacred history of Early Christian Milan and the persecution and sanctification of the Milanese Christian population is shown.[13] Other than this, the next evidence of mosaic in Milan dates to the late fifth-century rebuilding of the baptistery by Bishop Laurence under Gothic rule.[14] Milan had been weakened as a city after the imperial court moved to Ravenna in 402, losing resources and status alike, its bishopric falling behind both Ravenna and Aquileia in importance. This last may explain the local emphasis in the S. Vittore mosaics. Any investment in church building was further curtailed when the city was sacked by the Huns in 452 and then in the later part of the century when it fell to the Ostrogoths. The baptisteries and these other Italian sites suggest that mosaic itself was used widely by local communities of different sizes, not restricted to the imperial centres of Italy. Nonetheless, it was surely from its use in those capitals that it derived much of its standing as a medium of display, and so I move now to consider mosaic and its imperial and ecclesiastical connections in the context of the three fifth-century capitals of empire, Rome, Ravenna and Constantinople.

CAPITAL OF EMPIRE I: ROME AND ITS BISHOPS

It is in Rome that the use of mosaic as an ecclesiastical rather than imperial medium in the great churches becomes visible. The biggest change in the Western Roman world was a gradual one. It was the transition from a system of rule built around an emperor who, if no longer a god, was God's regent on earth and whose will determined the shape of state and church alike, to one in which the world was gradually splitting apart and reforming into kingdoms of shifting sizes and configurations, each with its own ruler. This shift opened up space for the bishop of Rome, heir of St Peter and St Paul, to develop his authority and kingdom, if he could, and to seek to establish it across the Christian world.[15] It is apparent that mosaics could be used as one tool in this endeavour, not the largest nor the most powerful, but potent none the less for what they both said and symbolised.

The big political events of the fifth century make it clear that the city of Rome continued to have a symbolic importance in the empire, both East and West, to Romans and non-Romans alike. It remained the home of empire, enhanced by the lustre around the idea of empire and its continuation, and increasingly it was viewed as a centre, if not *the* centre of the Christian faith. Only gradually was it superseded by Constantinople, the New Rome. This was despite Rome being sacked for the first time in 410 by the barbarian Goths under their leader Alaric, and again in 455. Though in 410 Rome was not the administrative capital of the Western Empire (that role was held first by Trier and Milan and then, from 402, by Ravenna), the despoiling of the centre of the civilised world sent shock waves through the empire, though how far it indicated the end of the Roman Empire is another story. It was certainly a less stable world after the Sack, with any aura of invincibility gone forever, but it was still Roman and the Western emperors still continued to rule, either for themselves or as front men for strong-arm military commanders.[16] Eventually, the commanders would take overt control for themselves, but

that was neither necessarily predictable nor inevitable.

How unstable matters really were is unclear: the fall of the empire was not expected, and for many life went on in the old traditions, battered and a bit fire-blackened round the edges, but not necessarily seen as the start of something new. Though damaged, Rome and its empire did not collapse in 410, and how much damage the Sack did in and to the city itself is unclear: there is a tendency to ascribe any evidence of fire destruction in Late Antique Rome to it, but this may have been overestimated.[17] Rome remained the largest city of either East or West, with a population of perhaps half a million, dropping by the end of the century to maybe a quarter of a million.[18] Both before and after 410, it was a rich city, inhabited by immensely wealthy senatorial, aristocratic families – that of Melania the Younger for example, the liquidation of whose enormous estates (which brought in about 900 pounds of gold yearly) between 404 and 406 caused consternation in the city and severely damaged the property market.[19] Even a second pillaging of the city by the Vandals in 455 and the removal of the 'last' Roman emperor, Romulus Augustulus, in 476, by Odoacer, did not ruin Rome. It remained as Odoacer's (who called himself *rex*) and his successor's base until the invasion of Theoderic the Ostrogoth in 489.

In this context, on a far smaller scale than changing rulers and recurrent sacks, mosaics offer another intimation both of the surviving wealth and sophistication of the city and of its continued 'Romanness'. Although it is often said that, as a result of the events of 410, building work in Rome ceased until the reign of Pope Celestine I (422–32) and his successor Sixtus III (432–40), this would actually only represent a ten-year hiatus. S. Pudenziana sits right on the 410 cusp. If it was constructed before the Sack, then perhaps the inscription on Christ's book, '[I am] the Lord, the preserver of the church of Pudentiana', does indeed mean that the church was not destroyed in 410.[20] If, however, the church postdates it, then that indicates that the resources for buildings and for mosaics existed in the city not long after the Goths. Similarly, the *titulus* Pammachi (now SS. Giovanni e Paolo) on the Caelian Hill was founded before the Sack but appears to have been decorated and used soon after it. New, splendid and large churches continued to be built: S. Sabina and S. Maria Maggiore in the 420s and 430s; S. Stefano Rotundo in the 450s, for example; the venerated great Constantinian basilicas such as St Peter's, the Lateran and S. Paolo *fuori le mura*, were kept in good repair, added to and even extensively rebuilt. And later, even the 'barbarians' got in on the act, founding and decorating churches such as S. Agata dei Goti and S. Andrea in Catabarbara for example. This was not a city in ruins.

These foundations and their mosaics provide some evidence of the range of resources and skills that remained in the city and of who had access to them, and both buildings and mosaics made public claims about faith and power on behalf of their patrons. What does change is who those patrons were. In the fourth century, surviving mosaics appear to have been overwhelmingly imperial, implying an imperial lead in supplying public buildings, and a display of that philanthropy and civic support that was the mark of a 'good' emperor. In the fifth century, although members of the imperial family continued to support building in Rome, much of their provision lay elsewhere in the alternative administrative capital cities of West and East, Ravenna and Constantinople. As Christianity itself became more of a given within the empire, and paganism less so, so the patriarch of Rome (he was called 'papa' or 'pope', but this did not become a formal title until the eighth century) was in a strong position.[21] He could and did progressively represent himself as Christ's successor and the heir of

Peter, the Rock upon whom Christ had built his church; the Roman Church that he ruled gained much of its prestige from its foundation by the two most important of the apostles, Peter and Paul; and its church buildings were the work, by and large, of the thirteenth apostle, the saintly emperor Constantine himself, and stuffed full of the great relics of Christendom. All of this offered a strong foundation for religious, and consequently political, authority. As the emperors and kings moved away from Rome and their generals looked to maintain Roman rule in Italy, so increasingly at local level within Rome itself popes and clergy moved into the space offered and took on many of the traditional imperial roles of civic maintainence and support, from church building to feeding the needy.

Something of all of this is conveyed in the ways in which ecclesiastical patrons used churches and their mosaics. The large (53 metres long) basilical church of S. Sabina on the Aventine, an aristocratic area of Rome, was founded not by an emperor but, according to the mosaic dedicatory inscription, by the presbyter Peter from Illyricum, in the reign of Celestine I (422–32).[22] Peter must have been a man of considerable wealth and standing and in his church, built presumably for the local community, he seems to have spared no expense. A great deal of marble was used inside, including twenty-four matched columns, capitals and bases of white Proconnesian marble that, new or reused, would not have come cheap. There seem to have been mosaics on all four walls. Now, only the dominant dedicatory inscription (gold mosaic letters on a blue background) on the west wall survives (Fig. 72). Such inscriptions would have formed an eye-catching signpost to the patron; dedications in this colour scheme were increasingly used in Roman mosaics, mainly in apses, literally highlighting the donor as well as underlining the brilliance of divine light within the building.[23] As well as the text, two rather grim-looking females, labelled as

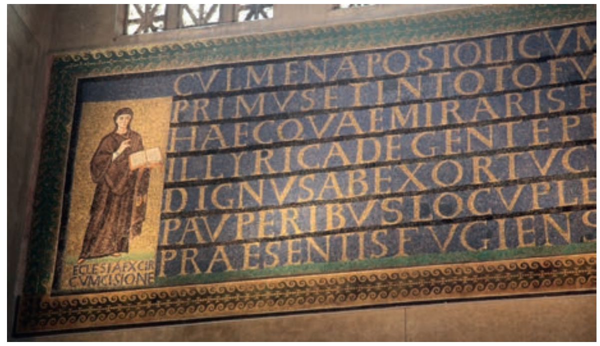


Figure 72 Part of the mosaic inscription, gold on blue, and the representation of the Church of the Jews from the west wall of S. Sabina, Rome, fifth century.

'the Church of the Jews' and 'the Church of the Gentiles', are depicted at either end of the inscription. This theme of the two churches brought together and of the Jews superseded by the Christians (especially the Roman Christians) as God's Chosen People is one that was popular in fifth-century Rome. It was used to emphasise the importance of the Roman church, and thus its leaders, as we shall see at S. Maria Maggiore. Traces of mosaic also survive from the half dome of the apse of S. Sabina, and it is more than likely that the arch above the apse and even the nave had mosaics: if the sixteenth-century wall painting now in the apse replicates the original iconography, then that area held an image of Christ in paradise surrounded by saints, with the four rivers of paradise below and the Lamb of God amid the apostles who were also shown as lambs.[24] The arch wall now has painted busts of saints in *tondi* and images of the cities of Bethlehem and Jerusalem, which may also have originally been there in mosaic. Although the iconography is not identical, the apostolic and eschatological themes are ones shared with S. Pudenziana, and are refrains that echo through fifth-century mosaics.

S. Sabina makes it apparent that non-imperial patrons could and did commission large mosaics, and that those patrons were prepared to make their role known to everyone who entered the

church. Increasingly in Rome, the role of patron was taken by the bishop of Rome himself. Impressive as S. Sabina must have been, it was neither the largest nor the most prestigious foundation in the city in the fifth century. That was the church of S. Maria Maggiore (79 × 35 metres) on the Esquiline, constructed under the patronage of Pope Sixtus III (432–40), who was responsible for several other churches in Rome, including S. Pietro *in Vincoli*, on the edge of the Forum.[25] Unlike S. Sabina, S. Maria Maggiore was not built as a community parish church. Instead, it was a papal basilica built for the whole city and dedicated to the Mother of God (*ecclesia sanctae dei genetricis*). Mary had been given the title 'Mother of God', *genetrix dei*, or 'God-bearer', *Theotokos*, at the Church Council of Ephesos in 431, a Council that had met to settle a Christological dispute between the patriarchs of Constantinople and Alexandria about the nature of Christ. In approving the theology of Cyril of Alexandria, which taught that the humanity and divinity of the Incarnate Christ were joined in one hypostatic union, the Council recognised two natures, human and divine, in the one person of Christ, and identified Mary as Mother of God, a title and a role that were to have enormous significance for her cult. As a result of this theology, Mary's portrayal served to underline her Son's Incarnation, and so his whole salvatory mission. Sixtus' predecessor, Celestine I, had backed Cyril and sent delegates to Ephesos and it seems very likely that Sixtus' foundation with its dedication reflected the conclusions of Ephesos.

Thirteenth-century renovations moved the apse of S. Maria Maggiore back by about 6 metres. What was depicted in the original apse is now unknown but, given the dedication of the church, it may possibly have been Mary herself, perhaps with her Child, as may have been the case in the fifth-century apse of the Basilica Suricorum of S. Maria in Capua Vetere in southern Italy, and possibly, dressed in imperial robes, on the model of the icon of Maria Regina in S. Maria in Trastevere.[26] If so, it would have been an early image of the Mother of God, rather than Christ, in this central position, but that might well have been a consequence of the acts of the Council of Ephesos. There was certainly a second image of Mary in the church, recorded by an inscription: it was a mosaic on the inner wall above the entrance to the nave which depicted her with five martyrs offering her their crowns.

Despite the various restorations, changes and Baroque accretions to the architecture and the decoration of the church, S. Maria Maggiore still feels close to its early Christian appearance (Fig. 73), retaining much of the shape of a three-aisled basilica and the huge reused marble columns and very large windows above the columns of that basilica. Now every second window is blocked, but then the building would have been full of light. S. Maria Maggiore was lavishly marbled, stuccoed and mosaicked. Sixtus' fifth-century mosaics survive in the nave and on the triumphal arch, and give us a sense of what the top patron and his mosaicists could accomplish, a statement of confidence.

The achievement was lavish. Below the windows in the nave are forty-two mosaic panels, framed by stucco; traces of a mosaic scroll frieze running the length and breadth of the church survive below these. The nave panels portray Old Testament scenes: on the north wall is God's promise to Abraham that his people would be the Chosen People and its fulfilment; on the south are stories about Moses (Fig. 74) and Joshua, both precursors of Christ.[27] All are images of sacred history revealing God's plan for his people in a style reminiscent of the language of Roman historical art: Abraham and Joshua appear as military captains; scenes of battles and the sack of cities evoke the sorts of images seen in imperial art, on the Arch of Constantine for



Figure 73 View into the enormous basilica of S. Maria Maggiore, Rome, fifth century, looking along the nave and into the apse with its fifth-century mosaics on the triumphal arch and thirteenth-century mosaic in the conch.



Figure 74 Detail of one of the nave panels: the Israelites having crossed the Red Sea, Moses turns to close the waters and drown the pursuing Egyptians, S. Maria Maggiore, Rome, fifth century.

example. But they were also all scenes that were given a Christian reading. In narrating the story of the salvation of the Children of Israel, the images also invoked the redemption of mankind and the completion of the Old Testament covenant through the mission of Christ. Significantly, an image of the Old Testament priest Melchisedek, the priestly forebear of Christ, offering bread and wine, is located closest to the east on the south side of the church, suggesting both the Eucharist (celebrated on the altar located more or less below the image) and the sacrifice of Christ. Opposite it, on the north wall, is the scene of Abraham entertaining three angels unawares, a scene believed to foretell the Trinity. In this way, a theme apparent also at S. Sabina recurs again: the 'old church' of the Jews and the 'new church' of the Christians. Though something of their theological and temporal message is clear, these images along the tops of the walls are actually too small to see or make much sense of; it is questionable how much of them anyone using the church would have taken in. Instead, attention was drawn to the altar, the apse and the triumphal arch.

The mosaics of the triumphal arch (Fig. 75) are more overtly Christian than those of the nave. At the top is the *Hetoimasia*, the empty or prepared throne bearing the insignia of Christ's Passion and awaiting his Second Coming. It is flanked by the apostles of Rome, Peter to the viewer's left and Paul to the viewer's right, together with four winged creatures, a man, an ox, a lion and an eagle. These are the four living creatures of the Apocalypse positioned around the throne of God, who, as at S. Pudenziana, were also identified with and used as representations of the four evangelists. Below, on what was originally the front wall of the apse, are two registers of scenes from the New Testament that place an emphasis on the childhood of Christ and give Mary a prominent place. But these are not straightforward images. Who is shown and in what context is often hard to understand: is the imperial-looking woman in the upper register Mary, in a sort of Annunciation scene? What did viewers make of the enthroned Christ-Child flanked by two seated female figures. Who were they? Mary and a Sibyl? A personification of the Church? The two Churches once more?[28] These images move away from a simple biblical narrative into something more complex, but with no guides, no names, to help the viewers. Were fifth-century viewers meant to understand these images? Could they even see them? Did that matter, as long as those in the church received a sense of grandeur, gold and glitter? And where did the ideas come from? These tight, small-scale scenes on the arch are, like the nave mosaics, reminiscent of other monumental art in Rome, the sculptures that spiral their way beyond the viewers' sight on Trajan's Column for example. At the very bottom, more visible, six sheep stare up at the jewelled cities of Bethlehem and Jerusalem, subjects hinted at in both S. Pudenziana and S. Sabina, though this is the first time this motif survives in mosaic. But these scenes share the themes of those in the nave, above all of the New Covenant and the new People of God: the Infancy of Christ underlined the message both of the salvation of mankind through his birth and of the merging of Jew and Gentile to create the Christian Chosen.

The survival of an elaborate mosaic series, or indeed any pictorial cycle, in the nave is relatively rare in this period, though such cycles had been in existence from at least the third century.[29] St Peter's, the Lateran and S. Paolo *fuori le mura* may all have had such sequences, though they may have been in paint rather than mosaic. Bishop Paulinus (409–31) described a painted cycle on the high wall of the church he had erected at Nola but noted that such decoration was rare.[30] Mosaic in the nave as well as the east end may therefore have been a feature generally



Figure 75 The triumphal arch, S. Maria Maggiore, Rome, fifth century, with the scenes arranged in registers and Pope Sixtus' inscription below the Empty Throne at the centre.

limited to the great basilicas. At St Peter's and S. Paolo, narrative images depicted the lives of these name saints; S. Maria Maggiore's Old Testament cycle is different, but the Christian reading that can be applied to these scenes, foreshadowing Christ, underlines Mary's place as his mother and central to his Incarnation. The ideas behind the programme are very similar to those behind the decoration at St Peter's or S. Paolo, with the Old Testament offering a commentary on the New, with the presence of eschatological elements which remain a consistent theme in many of these early mosaics. But there is also considerable variety in the decorative programmes and the specific iconographies used in these Early Christian churches (later ones too), which reflect the wishes of each patron, the various functions of the churches in their specific temporal and geographical settings.

In S. Maria Maggiore and its mosaics, Sixtus emphasised a conceptual shift, reiterating the status of the people of Rome not as Roman citizens but as God's Chosen. Demonstrating how the Old Testament foreshadowed the New, how Christ's salvatory mission was always part of God's divine plan for mankind, and highlighting the promise (and potential threat) of the Second Coming were recurrent themes in fourth- and fifth-century Christian art. Placing the people of Rome into that plan was different. In the centre of the triumphal arch, below the Empty Throne, Sixtus placed an inscription reading *Xystus episcopus plebs dei* – 'Sixtus, bishop to the people of God', defined now not as the Jews but as the



Figure 76 Apse mosaic in the Chapel of SS. Cyprian and Justina (or perhaps SS. Secunda and Rufina) in the Lateran Baptistery, Rome, fifth century: the green and gold acanthus scroll worms across the background; the small Lamb of God and four doves perch on a cornice above which opens the canopied heaven.

Romans.[31] This brief statement was also a comment on papal standing and power: Peter's successor, shepherd of the Christian flock, himself a part of the divine plan, the bishop standing in for the emperor as shepherd of his people before God. This was one step in the tangled and long-drawn-out process that transformed the bishop of Rome from one bishop among many to St Peter's heir and the leader of Christendom.

Both S. Sabina and S. Maria Maggiore were statements of confidence on the part of their patrons, visible testimonies to the resilience and wealth that remained in Rome after 410. Throughout the fifth century, popes continued to attest Rome's place as capital of the Christian world through other building and rebuilding in the city. The Lateran, the bishop's seat, was spruced up. Mosaics, a mixture of figural and aniconic iconography, were installed in the Chapel of SS. Cyprian and Justina in the Baptistery next door to the church, perhaps also examples of Sixtus' patronage.[32] The eastern apse (Fig. 76) depicts fantastic green-yellow acanthus scroll decoration covering a deep blue background, whilst in the centre of the apse arch Christ the Lamb is depicted under a shell and flanked by two doves on either side. They stand on an egg-and-dart lintel, suggesting the cornice of an opening into the sky above, like the oculus of the Pantheon in Rome. Beneath, six small gemmed crosses dangle into the scrolls. The now-lost mosaic of the apse on the opposite side contained a similar scroll decoration above an Arcadian scene of four shepherds with their sheep. Various elements – the doves for one – derive from traditional Roman iconography and

are reminiscent of floor mosaics; the acanthus, common in sculpted capitals for example, survives here in mosaic for the first time, as does the canopy of heaven. Both were to have a long history in Roman mosaic work.

Even the further pillaging of Rome in 455 did not bring this sort of work to a stop. Not long after this event, another of the great Constantinian basilicas, St Peter's, gained a mosaic on its façade (an image later restored in the seventh century and again in the ninth). What the mosaic depicted is unclear but it has been reconstructed to include Christ as a Lamb, the four Beasts/evangelist symbols and the twenty-four Elders, St Peter, the Emperor Constantine being healed of leprosy by Pope Sylvester and, significantly, an inscription making reference to the sack of 455.[33] Placing the first Christian emperor on the front of his church at St Peter's in this way served to underline a relationship between imperial and papal power in which the pope took the dominant role. Though the mosaic appears to have been the donation of the aristocratic Flavius Avitus Marinianus, both praetorian prefect and consul in Rome in the 420s, and his well-born wife Anastasia, who was perhaps a great-great-granddaughter of Constantine, it seems that it was made with the encouragement and support of Pope Leo I (440–61). This is not the last time that a pope and a wealthy and presumably devout noble family were to advertise their alliance prominently and publicly.

A few years later, continuing fifth-century renovations of Constantine's foundations, at the Lateran basilica Pope Hilarius (461–8) added the Oratorium of S. Croce and the Chapel of St John the Evangelist with its ceiling mosaics (Fig. 77) depicting the Lamb of God inside a circular wreath in the centre, framed with plant motifs and great swags of floral garlands, all against a gold background.[34] Hilarius also replaced paintings in the apse of the church of S. Anastasia with mosaics.[35] Very different was the work of Pope



Figure 77 The golden ceiling of the Oratory of St John the Evangelist, Lateran Baptistery, Rome, fifth century, with the Lamb of God in the centre, haloed in blue, and birds of various sorts flanking *kantharoi* at the bottom.

Hilarius' successor, Simplicius (468–83), at S. Stefano Rotundo. In contrast to the great Early Christian basilicas, this was built as a round building enclosing an interior cross shape, with no obvious entry or orientation. It was, however, no less large: the outer wall is some 65 metres in diameter.[36] Constantine's round Church of the Anastasis in Jerusalem may have served as a model, though many of S. Stefano's architectural features are also very Roman.[37] Simplicius was also responsible for the church of S. Bibiana, which too may have contained a mosaic, in the aristocratic and imperial Esquiline district of the city.[38] Popes also patronised mosaic outside of Rome itself. At Capua Vetere (Naples), for example, Pope Symmachus (498–514) founded a church and installed an apse mosaic. According to the *Liber Pontificalis*, most fifth-century popes were generous sponsors of church buildings, fixtures and fittings.[39] That mosaics continued to be installed in both new and old churches suggests that, throughout the century, papal assets had

withstood the shock of violence and pillage and the pope possessed enough resources indeed to allow not simply for the care of his flock but for building and rebuilding and for extravagant, luxurious and high-value fixtures and fittings, from marbles and mosaics to textiles and vessels of precious metals. This was part of what being pope entailed.

Though popes were stepping up, it is not quite accurate to suggest that the emperors really abandoned Rome in the fifth century. Although the administration of the Western Empire was conducted from Milan and then Ravenna, emperors still spent time in Rome and money on its buildings. The donations of Valentinian III (425–55) to Roman churches, according to the *Liber Pontificalis*, were the largest since Constantine's.[40] In terms of imperial Christian buildings and mosaics, the most significant was the Church of S. Paolo *fuori le mura*, on the site of the martyrdom and burial of St Paul. This had originally been founded, on a small scale, by Constantine. Rebuilding on a massive scale was begun by the joint emperors Theodosios I, Valentinian II and Arkadios in 383 and completed at some point between 395 and 423 – again, around that period of 410 – by the Emperor Honorius and his sister Galla Placidia. (Daughter of Emperor Theodosios I, she had a remarkable career. Having been kidnapped from Rome in 410 and married to Ataulf, brother-in-law and successor to the Gothic king Alaric, on her return to Rome she had been married to the patrician Flavius Constantius, Honorius' right-hand man and co-emperor between 417 and 422, and she was to play a significant role in the ruling of the empire as regent for her son, Valentinian III.)

At S. Paolo, the mosaics of the triumphal arch and perhaps also the paintings of the aisle (though since these are known only from an image of 1741, their date is uncertain) were Galla's (and also Honorius'?) work.[41] The *Liber Pontificalis* further records that Pope Leo I (the Great) also played a part – perhaps with Galla – in the restoration of the church after a disastrous fire in 441. The triumphal arch (heavily and horribly restored in the nineteenth century – for what is left see Fig. 155) offers another image of eschatological triumph, echoing the general meaning of S. Pudenziana and S. Maria Maggiore. There appears to have been a bust of Christ at the top, flanked by the four Apocalyptic creatures or symbols of the evangelists; below this, the twenty-four Elders of the Book of Revelation offered up their crowns; Peter and Paul were located in a register below at the starting point of the arch.[42] Painted rather than mosaicked scenes ran the length of the nave, very similar to the late fourth-century nave decoration of St Peter's and S. Maria Maggiore. They showed scenes from the Old and New Testaments, from Creation and God's Covenant with his Chosen to the life of Christ and the Missions of Peter and Paul, reminding viewers both of God's plan for the world and of Rome's place at the centre of that plan. Apostles and prophets filled the window spaces, and *tondi* of popes from Peter to Leo himself formed the lowest level. Whether the change in medium was a financial, time-related or conceptual modification can only be speculated on: certainly it would have been a visible one that served to accentuate the significance of the east end of the church.

Galla herself was also responsible for mosaics in Constantine's church of S. Croce in Gerusalemme, the church most intimately associated with the discovery of the True Cross by Constantine's mother, Helena. Galla's contribution was to mosaic a small room behind the apse which may have housed a relic of the True Cross: what the mosaics looked like is not known, other than that they included an image of the pope, Celestine I.[43] However, both S. Paolo and S. Croce bear witness to members of the imperial family actively promoting Christian Rome. Both

churches were Constantinian foundations, and we know from elsewhere that Galla was always keen to emphasise her imperial connections to the Flavian emperors and to the saintly Empress Helena.[44] And in both cases, the mosaics are also associated with popes, a reciprocal connection of benefit to imperial family and bishop of Rome alike.

That ecclesiastical support, including mosaics, mattered to churchmen and lay patrons alike is perhaps underlined by one final example from Rome, the last imperial or near imperial mosaic known from the city. It was installed in his church of S. Agata dei Goti, St Agatha of the Goths, by Ricimer, the Romanised barbarian general who was de facto ruler of the West from 456 until his death in 472. The mosaic was destroyed when the apse of the church collapsed in the sixteenth century but drawings suggest that it depicted Christ seated on a globe, flanked by the twelve apostles. At S. Andrea in Catabarbara, something similar seems to have happened. This church had been a secular building founded by Junius Bassus, father of the better-known Junius Bassus (the city prefect and owner of the elaborate sarcophagus), in 331. In the mid-fifth century, a Goth named Valila, a member of the senatorial aristocracy who became military commander of the Western imperial troops after the death of Ricimer, bequeathed it to Pope Simplicius as a church.[45] The apse mosaic is again known only from drawings. Christ was in the centre, flanked on either side by three apostles; below his feet, the four rivers of paradise flowed from a small mountain, similar to S. Agata. Valila seemed determined that the church should, through his patronage, preserve his memory, a remarkable assimilation of Roman and Christian values by a Christian Gothic aristocrat in Rome. These acts of Christian patronage by both Ricimer and Valila suggest that the deed of founding a church (and perhaps also of putting a mosaic in it) was almost expected from those in power, a gesture highlighting their piety and generosity, qualities required of a good ruler, but perhaps also seen as something expected of a ruler in Rome. Such commissions underlined their Romanness, fulfilling a central imperial duty. It is also worth noting that mosaics were not always large and public. They continued to be added to private tombs in the catacombs in the fifth century, for example in the Catacomb of S. Ermete, close to the crypt of SS. Protus and Giacinto. Here, a mosaicked *arcosolium* (tomb niche) included flora, fauna, and scenes including Christ and the Virgin, Lazarus, and Daniel and the lion.[46] Although the occupant and patron are unknown, it appears that the medium continued to be used in the same private funerary context that was so much a feature of fourth-century mosaics.

It is apparent that, throughout the fifth century in Rome, churches continued to be built by emperors, popes, clergy and aristocrats. The surviving mosaics of the Roman churches reflect something of the sometime absence of emperors from Rome and the in-filling of that space by popes and clergy, a tangible demonstration of the increasing power and standing of, above all, the bishop of Rome. But significantly, 'barbarian' Romans also saw the usefulness of mosaic (as one tool among many) for establishing their Romanness, their status and their Christian piety. Notwithstanding the sacks of 410 and 455, Rome continued to be a prestigious city in the Late Antique world: it was the Christian city of Peter, the rock on whom the Christian church was founded, and of Paul, apostle to the Gentiles. It was, despite the movement of emperors, still the centre of the Roman world, still the place that invaders and defenders of the empire sought to capture or to hold. In this increasingly Christian city, piety and Roman tradition as expressed in church building mattered and patrons still had large amounts of money to spend.

CAPITAL OF EMPIRE 2: RAVENNA, EMPERORS AND BISHOPS

But places other than Rome served as bases for the imperial court. In the early years of the century, Emperor Honorius moved his court from Milan to Ravenna, where it remained until the 450s. Why Honorius settled on Ravenna is unclear. It was believed at the time to be an easily defended site, thanks to the marshes surrounding it, though the capture and recapture of the city in the fifth and sixth centuries suggests that this was an illusion. Ravenna, or rather its port of Classe a few kilometres to the east, was an important port on the right-hand side of Italy, one where links to the Eastern Empire could be maintained more easily and faster than at Milan or Rome. Perhaps Honorius, whose brother, Arkadios, was Eastern Emperor, perceived these as advantageous. Additionally, like Constantinople, Ravenna, though a city of some wealth and standing, was by no means a major population centre (perhaps 10,000–15,000), and may have offered the emperor a space away from the conflicts and internal politics of Rome.

Although the transfer of the imperial court to Ravenna transformed the city into an imperial seat, Rome remained the conceptual centre of empire.[47] But because of the imperial presence, Ravenna had an increased access to wealth and resources than it would otherwise: no other fifth-century Italian city saw growth on the same scale. To match Rome as an imperial city, Ravenna was provided with the appropriate infrastructures: a mint and an important bishop elevated in the hierarchy of the Church, for example, as well as the necessary buildings, including walls, aqueducts, palaces and churches.[48] In the case of these two last, construction also called for suitable decoration, and that, in many cases, meant mosaics. What is known of the buildings of Ravenna makes it very apparent that emperors and their officials still commanded the resources to create an impressive base. Evidence for at least eight ecclesiastical buildings with mosaics survives from fifth-century Ravenna: of these, the remains of five still exist in some form. Only one can be ascribed to the reign of Honorius. It was built by the emperor's chamberlain with imperial funding that had been meant for a palace. This was a church dedicated to St Laurence, a martyr saint particularly venerated by the Theodosian family, built in a cemetery outside the city walls and serving as a basilica for funerary purposes and the commemoration of martyrs and saints. It may have been decorated with mosaics, though we cannot be certain: the chamberlain was himself later buried in a chapel decorated with gold mosaic attached to the church.[49] Numerous ecclesiastical buildings date to the reign of Valentinian III (425–55) and his mother, Galla Placidia, regent between 425 and 437. A few, such as the cathedral, known as the Basilica Ursiana, S. Agata Maggiore and the Petriana in Classe, were the work of the bishops of the city.[50] Many more were founded under Galla's patronage. Unlike in Rome, where her recorded patronage lay in contributions to already existing churches, at Ravenna she built from scratch: two major churches, dedicated to the Holy Cross (S. Croce) and to John the Evangelist (S. Giovanni Evangelista) respectively, as well as various secular buildings on behalf of Valentinian III.

Galla's S. Giovanni Evangelista is dated to *c.* 426/7 and was built in fulfilment of a vow (threatened with disaster by a storm at sea, Galla prayed for protection from St John, promising a church in Ravenna in return for safety). The large basilica survives but has been heavily rebuilt after being bombed by the Allies in World War II. The mosaics were removed in the sixteenth century, that Italian period of enmity towards mosaic art. Descriptions, however, suggest that Christ was depicted in the top register of

the triumphal arch, handing a book to John the Evangelist, and accompanied by seven candlesticks and various other apocalyptic images, both reminding viewers of John's role as author of the Book of Revelation and also of Christ's own Second Coming. Beneath this was an inscription recording Galla's fulfilment of her vow and below that were scenes of her rescue by St John. Images of emperors from Constantine to Honorius perhaps appeared on the soffit of the apse arch. In the conch of the apse itself was an enthroned Christ holding a book and the twelve apostles were seemingly uniquely represented as books. Then came windows, flanked by the main dedicatory inscription (above) and an inscription from Psalm 67, 'Confirm, O God, that which you have wrought for us; from your temple in Jerusalem kings shall offer you gifts', both a reference to Galla's imperial offerings but also perhaps hinting again at the Roman people as people of God. Finally, at the lowest level, there were images of the Eastern emperors Arkadios and Theodosios II (Galla's half-brother and her nephew) and their wives, whilst in the centre Bishop Peter Chrysologos celebrated Mass in the presence of an angel.[51]

The eschatological elements apparent in S. Giovanni Evangelista are themes present in other surviving Italian mosaics, notably in Rome. But the imperial parts are some of the earliest recorded examples of royal portraits as a part of church decoration; their presence implies their acceptability to audiences and clergy alike.[52] They overtly underlined Galla's and her family's connections to the imperial Flavian and Theodosian dynasties, or at least the more Orthodox among them, since the dubious Arian emperors such as Constantius II and Valens may have been left out of the images. The mosaics also showed Galla herself as blessed by God, who had, through his saint, saved her. In fact, Galla Placidia appears to have seized an opportunity to highlight her own impeccable imperial connections and imperial piety at just the point at which she had taken power as empress-mother.

Galla's second foundation, the large church of S. Croce, no longer exists.[53] Only a small (E–W 3.4 × 10.2 m; N–S 3.4 × 11.9 m) cross-shaped building originally attached to the southern end of the narthex of S. Croce survives from the complex, the so-called 'Mausoleum' of Galla Placidia, dated perhaps to *c.* 430–50. This building was almost certainly not her burial place, though it could have served as one, and may well have been built as a martyrium or private chapel.[54] Its mosaic decoration is spectacular, complex and highly illusionistic. Above the door, a lunette mosaic depicts the Good Shepherd, Christ, young and beardless, holding a cross, with his sheep scattered around him; above the altar, opposite it, the mosaic shows a cupboard holding four Gospel books (perhaps representing the evangelists, similar to the depiction of the apostles at S. Giovanni Evangelista) and an unnamed saint, perhaps Laurence, perhaps Vincent, robes fluttering as he rushes towards the griddle on which he was martyred. In the other lunettes, deer drink from the fountain of life on a blue acanthus-scrolled background (Fig. 78), similar to that in the Lateran baptistery. The vaulting of the north and south arms of the building is decorated with a geometric, but non-compartmentalised, design of large and small rosettes; those of the east and west arms with a vine motif growing from an acanthus, with a Chi-Rho contained in a wreath at the crown of the vault. A series of different borders are used on the arches supporting the central tower, including a sort of 'fish-scale' pattern (north and south), a three-dimensional meander design (east), and a garland of fruits and plants (west). Eight figures, perhaps apostles or prophets, stand in the dome, which rises up in a dizzying spiral of gold stars on a midnight blue background (Fig. 79). These stars radiate



Figure 78 Detail from the mosaics of the 'Mausoleum' of Galla Placidia, Ravenna, fifth century, showing deer drinking from the fountain of life and gold acanthus and vine scrolling.

in concentric circles, sized so that they create an illusion of the ceiling being higher than it is and of the cross located over the circle of stars appearing closer to the viewer.[55] The ever-popular four Creatures of the Apocalypse occupy the four lowest corners. The designs are stunning and brilliantly executed, with a lavish use of colour and glass, but they are not unique to the chapel nor indeed to wall and vault mosaics: floral wreaths and vine motifs appear on floor mosaics; a dome filled with stars is found in S. Costanza; the cross among stars is employed in several other churches and baptisteries from the West in this fourth- to fifth-century period, including Albenga, S. Maria della Croce at Casaranello in Puglia, and S. Giovanni in Fonte in Naples.[56] All these examples are from relatively small buildings and from vault spaces: it is a subject and a form of execution that works well in an enclosed space.

The precise meaning of the mosaics is lost, but they call to mind Christ as Saviour. The cross echoes throughout the building both in the shape of the mausoleum and in the reiteration of the image; the space serves as an evocation of heaven as a place for prayer and ritual, and of the cosmic order, hinting at the Second Coming. An individual image of an individual saint serves as a central point of focus for the programme: the saint in the lunette facing the entrance – perhaps the saint to whom the building was dedicated, perhaps pictured because his relics were contained in the building – presumably serving as some sort of devotional focus. Though both S. Giovanni Evangelista and the 'Mausoleum' share themes of intercession, salvation and the



Figure 79 View into the spiralling gold stars of the dome in the 'Mausoleum' of Galla Placidia, Ravenna, fifth century, with details of apostles and the St Laurence panel below, and a sense of the wealth of contrasting decorative mosaic.

afterlife, the church with its emphasis on Galla's imperial standing is the more overtly political in its claims. The 'Mausoleum' suggests a more personal devotion, a monument in which there was no need for the patron to identify the particular saint. We can only wonder at how the adjoining church of S. Croce was decorated. But both buildings highlighted the status of empress and city alike.

Even after the emperors left Ravenna in 450, local notables, significantly a succession of bishops, continued to uphold Ravenna's standing and to construct and decorate churches in the city. Just as was the case for Albenga and Rome,

so too Ravenna required a baptistery. One had originally been built by Bishop Ursus as a part of his cathedral, but it was rebuilt by Bishop Neon (*c.* 450–73). The Baptistery is a free-standing octagonal building, like the baptisteries in other major cities such as Milan and Aquileia, not to mention Albenga, perhaps echoing the Lateran Baptistery. Neon filled his Baptistery with mosaic scenes.[57] These are very different from the aniconic images surviving from the Lateran Baptistery and Albenga. The Baptism of Christ – an appropriate if obvious choice of scene for this building – is located in the centre of the dome. Below, on a green base and against a blue background, the twelve apostles, separated by golden plants and led by Peter and Paul, march around, drapes of cloth above their heads. The lowest register has a repeating design in which four empty thrones flanked by a garden design straight out of Roman wall painting alternate with four niches containing a book on a lectern (the Gospels). In the lunettes of the arches, gold vine scrolls froth out from vases, entangling crosses, peacocks and griffins. The theme of baptism is more prominent than at Albenga, but both share imagery evocative of salvation and paradise. Below, completing the elaborate and costly effect, are stucco prophets and then elaborate hardstone decoration. Neon also completed the church known as the Petriana and hence was probably responsible for its mosaics. He himself was buried below a mosaic of Saints Peter and Paul (though where that was is unknown). Neon was not alone as a bishop patron of such buildings. Bishops John I and Peter II commissioned churches with mosaics, and the so-called 'Archbishop's Chapel', dating to *c.* 491–519, was also mosaicked.[58] In this work, bishops were almost certainly stepping up to keep their city supplied with the necessary ecclesiastical buildings, at whatever cost, to maintain its status after the emperors had returned to Rome. Much building in Ravenna in the fifth century, including church building, was constructed from bricks, marbles, architectural sculpture and even tesserae recycled from earlier Roman structures in the city.[59] Whilst this was a very practical measure, it was surely also understood as a reappropriation of the glorious Roman past and a maintenance of Roman traditions.

MOVING EAST. CAPITAL OF EMPIRE 3: CONSTANTINOPLE

In contrast to the Western capitals of Rome and Ravenna, the evidence for mosaic in Constantinople is, as with the fourth century, in short supply. Almost nothing survives of any fifth-century mosaics. The shell of the Church of St John in the Stoudios Monastery is the oldest surviving church in the city. This was a reasonably large basilica (it is about 25 metres long and 24 metres wide) built by the senator Stoudios either just before 454 or in 463. Excavations in the early twentieth century revealed that it had rich marble revetments and fittings and was mosaicked, though it is always possible that these mosaics postdate the construction of the church. They are known now only from a few tesserae and perhaps from a small fragment in the Benaki Museum depicting the Mother of God.[60] The large Chalkoprateia church, dedicated to the Mother of God, and built by the Emperor Leo I and his wife Verina, was constructed at about the same time as the Stoudios church and to a similar plan. It also contained mosaics, including what was probably a mosaic panel depicting the emperor, the empress and their son and daughter flanking the Mother of God.[61] Another image (again, we do not know the medium) in the same church showed the Mother of God flanked by two angels, then two saints, and then the two men who discovered her veil and brought it to Constantinople.[62]

Although this has much to do with its post-medieval history, the almost complete blank may also reflect the fact that Constantinople was still developing as a city at this point. In addition to the fourteen churches, the *Notitia dignitatum* lists five palaces, eight public baths and 4,388 houses in Constantinople. Compared to Rome, Constantinople in the fifth century was neither large nor wealthy: the rich land-owning aristocracy of the empire was still based in Rome rather than Constantinople. This was a century of transition where, retrospectively, Rome and Constantinople might be said to have been going in two different directions, one enduring two sacks and the gradual demise of empire, the other increasingly the focus of the empire and its resources.[63] At this moment, Rome was probably still the wealthier. Certainly its churches such as S. Maria Maggiore and S. Stefano Rotundo were bigger and more lavish than anything known from Constantinople. And Roman churches had resources on the ground – marbles and also mosaic tesserae – in a way not present in Constantinople.

THESSALONIKI

Outside of these capital cities, a final group of fifth-century mosaics survives in situ in a city that had been a short-lived imperial capital in the third and fourth centuries, Thessaloniki. By the fifth century, the city was still important, but as the provincial capital of the region, the province of Illyricum (the north-west Balkans) and the seat of the provincial Prefect. From the mid-fifth century, it was also a city increasingly on the borders of the empire and under threat from barbarians outside. If it was in any way typical of a city of this type, then the implication is that other such places also employed mosaics, filling the gap between Rome and Albenga.

Thessaloniki was also an important bishopric, and, throughout the fifth century, under the jurisdiction of Rome, and this too may have been a factor. In this context, it is perhaps unsurprising that the three surviving buildings with extant mosaics are all churches: the Acheiropoietas; Hosios David; and St Demetrios. One further site with traces of mosaic has been excavated, a hall, suggesting the probability of secular mosaic in the city.[64] Several towns close to the city or in the area also preserve evidence of fifth-century mosaics, all ecclesiastical: Philippi, Nea Kallikratia, Amphipolis and, a little further away, Nea Anchialos and Stobi. Thessaloniki itself continued to be a centre for secondary glass-making, and so conceivably for tesserae production, and raw glass could, as before, still have been imported there easily enough from the Levant, or indeed any other possible centre of glass production.

Each of the Thessalonian churches is very different from the others in both architecture and imagery. The Acheiropoietas (originally dedicated to the Mother of God) is a big basilica church. It has mosaics remaining in the thirteen arches of the colonnades on both north and south sides and the transverse arches of the narthex.[65] This sort of decoration was not unique; in accentuating certain space axes, it followed an ornamentation practice common in Roman imperial traditions. There is enough other evidence to suggest that the church had a full programme of mosaics: traces survive from the arches of the gallery, the west wall of a south outbuilding and the north face of the west pier of the south gallery; the baptistery, too, was almost certainly mosaicked. The surviving mosaics in the arches are non-figural, decorative and symmetrical, reminiscent of both floor mosaics and the birds and fruits of Roman wall painting. They use crosses and Christograms, books, birds and fish, flowers and fruit, curling vines and acanthuses. Christian themes can be deduced: Christ the

True Vine; the books of the Gospels; peacock feathers for eternal life; perhaps an overall paradisiacal theme.[66] It was a carefully constructed programme: the arches are arranged in pairs and threes reminiscent of the Rotunda (or vice versa of course, depending on the dates of the two sets of mosaic).[67] The mosaics themselves employ a lot of gold and some silver, together with a range of other colours, especially blue, red and green, suggesting both that these materials were obtainable and that they could be afforded by the patron. Who that was is not known. Two inscriptions ask for 'the prayer of him who God knows' and for 'the prayer of the humble Andreas'. His identity cannot be established: two fifth-century priestly Andreases have been proposed, a mid-fifth-century priest who represented the bishop at the Church Council of Chalcedon, or the late fifth-century bishop of the city. Either would imply that the church was an episcopal foundation, though actually its function in the city is not known.[68]

The Acheiropoietas church is a large building with a public function of display, if not of use. Hosios David is very different: small; seemingly individual; private. In the fifth century, it was a diminutive cross in square church, perhaps 12.1 by 12.3 metres, with a single protruding apse and probably a central internal dome. Its dating comes from three elements: a twelfth-century legend about the mosaic, describing its miraculous creation; the stonework and the plan – it is said to be one of the earliest examples of a cross in square church; and the blunt instrument of the style of the mosaic.[69] The Hosios David mosaic has been compared equally inconclusively to mosaics from those of the Rotunda (on the basis that both are mosaics from Thessaloniki), the 'Mausoleum' of Galla Placidia and the S. Aquilino Chapel in Milan (because all three contain the image of a beardless Christ); and with a range of later sixth-century mosaics such as S. Vitale in Ravenna (where the head of Abraham sacrificing Isaac is said to look like the head of the prophet on the left at Hosios David).[70]

But this small mosaic – the apse is all of 5.5 × 2.5 metres – is unusual and difficult to decipher since, despite these choices for comparison, it does not look like any other fifth-century mosaic. The iconography of the mosaic is exceptional, though the themes of apocalypse and the Second Coming are familiar from the Rotunda and from Rome[71] (Fig. 80). The central figure is a young and beardless Christ, seated within a circular mandorla on a rainbow, and holding an open scroll: whether he is meant as emperor, Christ Emmanuel, a feminised Christ, or all three, is ambiguous.[72] Around the mandorla, the familiar four apocalyptic creatures/ evangelist symbols appear; below the mandorla, the four rivers of paradise flow. But uniquely (in surviving imagery), to Christ's right stands a grey-bearded male figure, raising his hands to his ears and bending down. Behind him is a city situated in a rural landscape, and in front of him a bearded male figure, half-length and naked, shown in almost a grisaille technique, looks back at him, wide-eyed and hand upraised, from the blue fish-filled water of the rivers below. On Christ's left is a seated figure, also grey-bearded, an open book on his lap, hand to chin in contemplative pose.[73] Behind this figure, in the rocky landscape, is a hut. Who these two men and the figure in the water were meant to be is obscure: Old Testament prophets? New Testament figures? A mixture of both? Nor is the identity or purpose of the city and the hut in the background apparent.[74] Below the image, along the bottom of the mosaic, runs a cryptic inscription, raising as many questions as it answers: 'A living source, capable of receiving and nourishing the souls of the faithful [is] this all-honoured house. Having vowed, I succeeded and succeeding I paid in full. For the vow of her of whom God knows the name.'[75] It is a text that implies that the subject matter was highly personal, and this may be what makes the mosaic so



Figure 80 Apse mosaic, Hosios David, Thessaloniki, fifth century: Christ in the centre, dominates the scene. Silver and gold tesserae can be picked out in the haloes of the figures.

hard to decipher now (and perhaps also in the fifth century).

The inscription indicates that the patron was a woman, not a rare phenomenon in Late Antiquity, but a remarkable one. Her anonymity was shared by other patrons in Thessaloniki; at the Acheiropoietas, for example, the same phrase 'known only to God' is used of the male patron. It seems deliberately to underline the donor's humility in contrast to, say, a Pope Sixtus placing his name at the crown of the triumphal arch of S. Maria Maggiore. The inscription at Hosios David suggests that the church was a private foundation, a gift in fulfilment of a vow: the church was built in return for success in something. The existence of church and mosaic indicate that the patron could command the resources needed for the building, though the relative absence of gold and silver tesserae at Hosios David might indicate that they were beyond her purse. It might, of course, reveal that she could not get hold of them, but the use of metallic tesserae elsewhere in fifth-century Thessaloniki suggests that supply was not necessarily the issue. In fact, the mosaic generally appears to lack the clarity and quantity of glass in bright colours found in the Rotunda or the Acheiropoietas and the background appears to be largely stone (though this could be the effect of centuries of dirt). In the bigger picture of mosaic-making in Late Antiquity, Hosios David is an eastern example of that non-imperial and occasionally secular patronage suggested by Nola, Lucera and Casarano.

Finally, the third Salonikan church, dedicated to the patron saint of the city, Demetrios, was the one most venerated by the city's inhabitants. The cult of Demetrios and the establishment of his church perhaps dates to the fourth or fifth century but this early church was destroyed by a disastrous fire in 604; it was rebuilt and destroyed by a second fire in *c.* 620 and rebuilt again. There is much debate as to whether any parts of the earlier churches survive in the later



Figure 81 St Demetrios (with golden hands) awaits two suppliants: panel from the west wall of the Church of St Demetrios, Thessaloniki, fifth century.

one, not helped by the destruction of that building in 1917 and its subsequent reconstruction. The first church could have contained mosaics and some of these may survive in a fragmentary state on the inside of the west wall of the nave.[76] These mosaics move us towards a theme apparent in the cycles from St Peter's and S. Paolo *fuori le mura* in Rome and in the single image of St Laurence from the 'Mausoleum' of Galla Placidia, a theme that in all likelihood was shared by the images in the church of St Felix at Nola: images of saints. In St Demetrios, these are all images reflecting the power of the saint to achieve miracles. One of these putative fifth-century mosaics (Fig. 81) shows a nimbed saint, presumed to be Demetrios, his hands, done in gold tesserae, upraised in prayer, and flanked to his left by a child and an older figure (a parent?) and the fragments of a child (only bits of the leg, robes and head remain) to his right. The saint stands in front of a structure which may represent his *ciborium*, his shrine, which was a focal point in the church. The other mosaic depicts a standing saint, again probably Demetrios, against a cloud-filled sky, with, above his head, an angel who may be blowing a trumpet or perhaps holding a gold-sheathed staff.[77] A further detached fragment, now in the Byzantine Museum in Thessaloniki, shows a similar image of Demetrios as an orant saint, with a small figure (a child?) to his right.

This iconography, in its emphasis on a standing, fully frontal saint, hands in the orans position, is very similar to that of the saints of the Rotunda. But at St Demetrios, because of the later history of the church as a healing sanctuary, the panels with the saint and fragmentary children are interpreted as *ex voto* panels, gifts given to the saint in fulfilment of a vow or in return for healing. Such gifts in expectation of or gratitude for a service from a saint and from God were a feature of Christian art, probably from its inception, and we have already seen Galla Placidia at S. Giovanni Evangelista in Ravenna and the unknown woman of Hosios David offering both churches and mosaics in thanks for salvation and success respectively. The Demetrios panels,

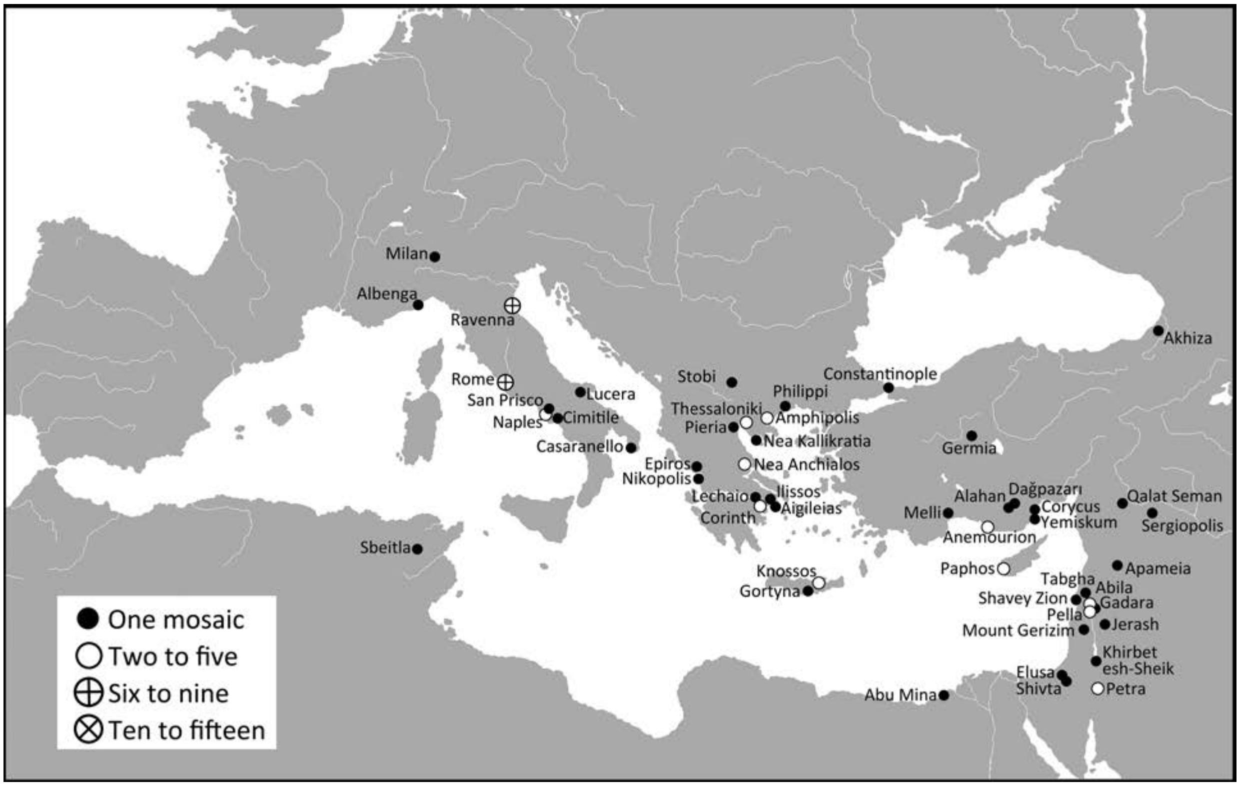
however, suggest that such offerings could be made in several places throughout churches, and were indeed an accepted form of church decoration. They are reminiscent in this situation of the mosaic panel of the Emperor Leo I and Verina in their church of the Chalkoprateia in Constantinople, or of Galla's mosaics in S. Giovanni. Indications are that showing the individual patron in the presence of the holy, as emperors had already done, was an increasingly popular option in religious art. Such images similarly evoke a key element of secular Roman public life, patronage. Alongside the official channels of state government, everyone sought a patron for protection and sponsorship. Indeed, even the officialdom worked through a system of patronage, of appeals to the individual, and ultimately to the emperor; the whole empire ran as a vast network of favours. In Christian terms, saints served as patrons for the individual before God, sponsoring even the mightiest, and images such as those from St Demetrios made the holy guarantor visible to his clients and the wider world.

The imagery used in these Thessalonian churches was as varied as the iconographies we have seen in Italy. Some familiar themes are present – the Apocalyptic Beasts at Hosios David, shared decorative elements – but each church had its own agenda and its own images to fit that. This is a recurrent theme: a general language widely understood but with a diversity of purposes. In Thessaloniki, as in Italy, mosaic was used in the fifth century for both large-scale public and smaller more private commissions. It appeared in these public arenas in association with the other costly trappings of the 'best' churches, notably marbles as revetments and columns. As with Rome and Ravenna, there is a sense that mosaic was a crucial element of a city and its important buildings. The amount of mosaic in Thessaloniki underlines that it was not a medium confined to Rome and Constantinople; like Ravenna, the work in Thessaloniki supports the idea of itinerant mosaicists and the establishment of local workshops; it implies that trade in glass was relatively strong. But the distribution of mosaics in the fifth century returns us to some of the questions about the use of mosaic posed by the relatively small and local or provincial baptistery at Albenga: its accessibility as a medium; the extent of patronage; the idea of mosaic as a token of Roman values.

THE DISTRIBUTION OF MOSAICS IN THE FIFTH CENTURY

Although the mosaics discussed above represent the bulk of surviving fifth-century mosaics still on the walls for which they were made, they are not the only evidence we have for mosaics in this period. Material in the form of mosaic fragments and scattered glass tesserae make it obvious that there were numerous other mosaics in existence throughout the Mediterranean world, indeed that there was an increase in the use and perhaps popularity of mosaic as a decorative art form. Compared to Map 1, the map of fourth-century mosaic distribution, Map 2 suggests an escalation in mosaic-making in the fifth century in both Western and Eastern empires. In contrast to the fifty-six new fourth-century mosaics of Map 1, seventy-seven new mosaics are plotted on Map 2; textual evidence exists for at least another twelve.

Of the seventy-seven, twenty-one come from Italy, with seven being from Rome and six from Ravenna. Twenty-two are recorded in Greece, many from the north, scattered throughout the region in churches of various sizes located in places of varying importance. In Asia Minor, ten are recorded, largely from Cilicia, and nineteen from the Levant. Two examples survive from North Africa. The map underlines the continued use of mosaic in the great cities and imperial capitals of



Map 2 New wall mosaics in the fifth century.

the empire, East and West alike. However, as in the fourth century, it also indicates that mosaic was widely used in a range of smaller and non-imperial sites. This is especially true in the eastern Mediterranean. Here, cities and towns of varying sizes maintained a tradition of mosaic-making in their churches: Petra, Pella and Gerasa (Jerash) in the Decapolis, for example; Apameia in Syria; Paphos in Cyprus; Knossos and Gortyna on Crete; Amphipolis and Nea Anchialos in northern Greece; Corinth in southern Greece; at Corycus and Dağpazarı in Turkey.[78] Other mosaics were installed in shrines and pilgrimage sites. Tabgha, in the Church of Multiplication of Loaves and Fishes, and the Church of the Theotokos on Mount Gerizim were two of several such sites in the Holy Land. In Egypt, at the shrine of St Menas in the Maryût, fragments of figured gold mosaic were found in the Church of Theophilos, the 'Great Church', consecrated between 400 and 410.[79] Some mosaics were located in monasteries: for example, the large monastic complex at Alahan, in the relatively poor province of Isauria in Asia Minor, was decorated with wall mosaic whilst the Church of St Michael at Germia (Yürme) in Galatia was decorated with the even more costly medium of marble revetments as well as with mosaic.[80] Glass tesserae from Qal'at Sem'an, the monastery and shrine built around the pillar of the stylite saint, Symeon the Elder, suggest that this church had mosaics, perhaps contemporary with the building.[81] Wall mosaic has also been found in the Georgian fortress and episcopal seat of Akhiza, now in north-east Turkey, established in the reign of King Vakhtang Gorgasali (446–522): this seems to have had a Virgin Orans in the apse and to have included gold mosaic.[82]

What the map does not tell us is why some places had mosaics whilst others (presumably) did not. In many of the examples of fifth-century

mosaics, the patrons can only be guessed at – perhaps the bishop or abbot, perhaps some imperial or local aristocratic sponsorship. Without Hosios David, there would be no evidence for female patrons. But the spread of sites in the Eastern Empire in particular suggests that enough people had enough money to choose to commission mosaics. The difference was that now the majority of these buildings, East and West, were religious foundations. It seems that increasingly wealthy Christians, often but not invariably members of the imperial family or the episcopate, perceived mosaic as a wholly appropriate medium for church decoration, and its use in churches superseded its use in secular building.

Nor does what survives in fragments show how much mosaic was in each of these buildings – whether, for example, only apses had mosaic or whether the use was more extensive. The relative quantities of what survives, even in Rome, make it clear that mosaic was not employed as often as paint, and that it was often used with paint – much of the decoration of the Lateran and at S. Paolo *fuori le mura* was in paint, for example. Whether in cities such as Rome it reflects the absence of the supreme wealth of the emperors, it may equally well indicate a liking for wall painting, easier, quicker, and perhaps more lively in its depiction of scenes. Nor, in almost all of these cases where the mosaics survive only as fragments and tesserae, can the iconography of the scenes be reconstructed. However, the quantity and distribution of mosaics suggest that the potential for their manufacture was scattered throughout the Roman Empire and that neither East nor West held a monopoly. It is apparent that mosaic was not employed only in big cities, and this highlights the issues around obtaining glass, tesserae and mosaicists.

It is possible that many smaller fifth-century wall mosaics were made exclusively of reused tesserae but this implies that there were enough such tesserae surviving in areas such as Albenga or Knossos to allow for such recycling. However, the amount and distribution of material that survives from the southern coast of Asia Minor and the Levant tells a different story. This may reflect the availability of raw glass from the Levantine factories and indicate that trade networks continued to function in the Mediterranean, whether linked directly to each site or via one of the bigger cities, and that in turn hints at the availability of both mosaicists and tesserae to patrons even in seemingly remote sites. Whether every major city had its already established mosaic workshop(s) or whether mosaicists travelled between cities cannot be established, in part because we have no idea about how much mosaic there might have been overall. However, the concentration of wall mosaic in western Asia Minor and the Levant may imply the presence of mosaicists there, perhaps based in Antioch and Jerusalem, rather than in Constantinople. In the western Mediterranean, matters are equally vague. Although stylistic comparisons can be drawn between some of the Roman mosaics and some from Ravenna, and although there are iconographic similarities between the mosaics of the Lateran Baptistery, the 'Martyrium' of Galla Placidia, who was a patron in both cities, and Albenga, how much weight can be given to these resemblances and what they tell us is unclear. Many other fifth-century mosaics – those at S. Maria Maggiore, for example – look very different. Potentially the mosaicists for all the Roman churches could have been based in the city and travelled to other sites as and when hired: as I suggested in the previous chapter, mosaic-making was very much a Roman creation, and was well established in the city in the fourth century. Equally, the quantity of mosaics in Ravenna and Thessaloniki implies that those cities could have supported their own workshops – for a time at least.

Noticeably, very little evidence of new fifth-century wall mosaic survives from the western provinces outside Italy. Put next to the data of

Map 1, it implies that, as a medium, wall mosaic remained popular in Italy but was more widely used further east. Although floor mosaics were relatively common in the northern provinces of the Roman Empire, wall mosaic does not appear at any time to have caught on in the same way that it did in the east. Whether this was because of aesthetic choice, climate (wall mosaic was perhaps less appealing in a colder climate) or economic factors (materials and artists being too difficult, costly and exotic to import, especially as the empire began to fragment) remains a matter for debate.

There is, however, some intriguing evidence for wall mosaic in southern France, especially along the Mediterranean littoral, suggesting the use of the medium was more widespread. Tesserae and 'cakes' of glass have been found in Marseilles, for one, and there is written evidence for fifth-century mosaics in two other southern French towns, Lyons and Toulouse. At Lyons, the Gallo-Roman aristocrat and bishop Sidonius Apollinaris recorded glass wall mosaics in a church built there by Bishop Patiens.[83] In Toulouse, the Church of Notre Dame de La Daurade, which was destroyed in the eighteenth century, contained what sound like fabulous mosaics in gold and green in three registers.[84] The top one featured scenes of the Nativity and Epiphany, the middle and lowest levels depicted saints, apostles, prophets and angels and a scene of the Annunciation. La Daurade was almost certainly a Visigothic foundation, kingly or episcopal, for Toulouse was the Visigothic capital between 418 and 507. So this is an example of the medium being used by one of the several 'barbarian' invaders of the empire, as we saw happening in Rome.

These examples imply that the wealth and materials for the making of mosaics existed in these areas, coupled with the will to use the medium. By this point, the Roman tax system was breaking down, and this made a huge difference to the fiscal institutions of the West, affecting a whole variety of structures, including the means of government itself (no money for official salaries, for example), trade (increasingly localised) and artisan production (increasingly small-scale). Large-scale building projects involving logistical effort and expense were unlikely to flourish as well under these conditions. Where they did flourish, as at La Daurade, they indicated enough surplus wealth, coupled with a real desire to make a statement. It is conceivable that the same was the case at Albenga; it may well have happened also in Milan and we shall see in the sixth century that the 'barbarian' de facto king of Italy, Theoderic, used mosaic on a considerable scale. It seems likely that at La Daurade, at Albenga, in Rome and in Ravenna, and further east in Thessaloniki, the use of mosaic was an overt sign indicating Romanness, either by claiming it or by holding on to the traditions of the empire.

The evidence for mosaic in many of the sites on Map 2 comes from fragments and scattered pieces. Yet where imagery does survive, it is clear that, though themes recur with some consistency, iconographies vary considerably. No two churches discussed here have the same programme, although they share ideas. Themes of heaven, of paradise (S. Pudenziana, the Rotunda, Acheiropoietas), of the Second Coming and its corollary, the Last Judgement (S. Maria Maggiore, Hosios David), of salvation, of divine and human juxtaposition and contact, and figures who could be venerated, recur time and again through different devices, figural and non-figural. None is unique to mosaic as an art form in this period and many share in the assimilation and takeover of Roman and non-Christian art by Christians. Because surviving mosaics tend to be those from the most sacred church spaces, they disproportionately preserve ceremonial and hierarchical subjects. But scenes are also designed to fit the sacred spaces they occupy: those several

baptisteries, for example, where much emphasis is on redemption and salvation through faith. The saints are important, whether Peter and Paul in Rome, St Demetrios in his church in Thessaloniki, St Laurence in Galla Placidia's chapel in Ravenna, or the serried saints in the Salonikan Rotunda. In the Roman episcopal churches, more political messages can be seen: God's new people; the importance of the church of the Gentiles with its base in Rome; Galla using mosaics in Rome and Ravenna to make points about her own imperial status. This is not as apparent in the Thessalonian mosaics, but it would be surprising if similar personally political agenda were not played out there. Although certain themes run through many mosaics (salvation, Second Coming), there is also considerable variation and considerable individualisation of each programme. At S. Giovanni Evangelista, for example, the theme of Galla's prayer for safety, her vow of the church in exchange for rescue and the fulfilment of that promise are emblazoned across the mosaic programme and the inscription on that programme. The patron's intentions can rarely be reconstructed but they can be guessed at, and while that is not the only meaning of an image, they are still a part of the story.

As the existence of erudite mosaics at Hosios David and La Daurade makes clear, sophistication in art was not restricted to Rome or the big churches. The iconographies of mosaics, like much of Late Antique and medieval art, are both endlessly complex and very individual. This has allowed for considerable debate about what a patron intended by particular forms of decoration and what the audience for that imagery might have understood. In the context of church mosaics, that leads to discussions centring on theology and spiritual issues as well as political and personal circumstances. Art certainly functioned as exegesis – the elucidation of allegorical meanings of the Bible – for us as well as them. Indeed, for many mosaics, the interpretations of the imagery are as varied as the number of scholars who have written about them. Certain themes and images recur but their use and meaning in one building is not an automatic guarantee of their function in another. What it is important to remember is that an image could have more than one meaning and was almost certainly interpreted in different ways by different people at different times. Furthermore, if images were in any way 'books for the illiterate', then almost certainly people were instructed in how to see them. But how far any one 'ordinary' viewer or any one 'educated' viewer might have interpreted the images, indeed whether they did, whether they saw or cared about nuances, is unknowable. And it is always a key question as to whether this mattered to the patron.

From what survives, it seems that diversity was unsurprising. And this is a theme that runs through the whole history of medieval mosaics. There are commonalities between mosaics, sometimes mosaics from the same time and place, at others across time and space. The temptation is to take them as part of a 'grand narrative', that the use of imagery relating to the Second Coming had the same meaning in fifth- and fifteenth-century Rome, that the Lamb was only Christ. There may well be some truth in this, but there are also several provisos. It is never really possible to ascribe only one significance to a motif; as motifs are used over time, so they develop a history of their own: the Lamb is Christ, but the choice of a Lamb in Albenga may reflect on a Lamb in Milan, say, and a Lamb in twelfth-century S. Clemente in Rome may be there because it is also in the sixth-century church of SS. Cosmas and Damian. Mosaics within the same city (Rome is the recurrent theme here because more mosaics survive there throughout the Middle Ages than anywhere else) do form an apparent network, can be seen to speak to each other.[85] But at the same time,

what survives cannot be all there ever was. The differences in the imagery reflect the variety and imagination within medieval art, the choices made; there is no need either to cram them into programmes of use or to explain away variations (often as mistakes or 'second-rate' imitations).

By the end of the fourth century, the Roman Empire was a single state based in Constantinople and ruled by a single emperor, Theodosios I. But Theodosios was succeeded by his two sons, one in the East and one in the West, and the empire was never reunited. The last Roman Emperor of the West, Romulus Augustulus, the Little Augustus, was sent into exile in 476 and replaced by a Romanised general of barbarian stock, Ricimer. Rome was sacked twice in the fifth century, in 410 and 455: between these two dates, the western part of the empire had remained relatively stable, ruled by a series of emperors and their 'barbarian' supporters from cities other than Rome. After 455 and beyond 476, Italy itself remained relatively stable under the rule of Ricimer: it was not invaded and conquered by incoming barbarians in the same way as the rest of the West until the successful campaigns of Theoderic the Goth (of whom more in the next chapter) between 489 and 493. But gradually throughout this century and subsequent centuries, the systems of Roman imperial government unravelled and became simpler. The elite, those who had governed under the emperors, turned to new patrons, to barbarian military leaders, able to protect them. Only the Church, whose organisation stood outside that of the empire, retained its level of administration, and its bishops gained in standing. In contrast, the Eastern Empire remained relatively intact and perceived itself as the true Roman Empire throughout its entirety. Increasingly it saw the West as no longer equal because it was no longer an empire and no longer truly Roman. Although there were internal civil conflicts in the East (ironically one such was in progress in 476, between two usurpers, Zeno and Basiliscus), the organisation and administration of the state was little affected – one state, one emperor remained the rule – whilst the relationship between emperor and Church was increasingly complex.

What is apparent in mosaics fits this pattern, though not coherently. In this body of material, the iconographies employed remained general and motifs stayed similar, but combinations and details of these motifs were ever-changing, creating an iconography that was varied, complex and individual, giving each image its own place and own temporal and local meaning. In both East and West alike, the use of mosaics raises practical issues: about the continuation of trade contacts, for example, and the existence of surplus resources and the availability of artists. Because what survives is mosaic in churches, the narrative inevitably follows the process of Christianisation, rather than records of military successes and failures or administrative changes and tax disasters. The will and the resources for large public commissions is evident, but because of the wealth needed the patrons were inevitably high status: so mosaics can say something about ecclesiastical and imperial institutional expansion, investment, theological debates and potentially changing values. In Rome, for example, the continued use and scale of the medium throughout the fifth century suggests that the city was not completely devastated by barbarian incursions from the north, its sacks and the political changes within the empire. Surviving mosaics tell us that in big, important, often imperial or episcopal cities, rulers and bishops used mosaic as one tool among several to further the greater glory of God and self. This may well have given the medium a certain cachet, a status. But Map 2 and the presence of mosaic at places like Albenga or Nikopolis or in Hosios David, or indeed in Visigothic Toulouse and Gaulish-Roman Lyons, suggests that the impetus for its use was more widespread than this emphasis on

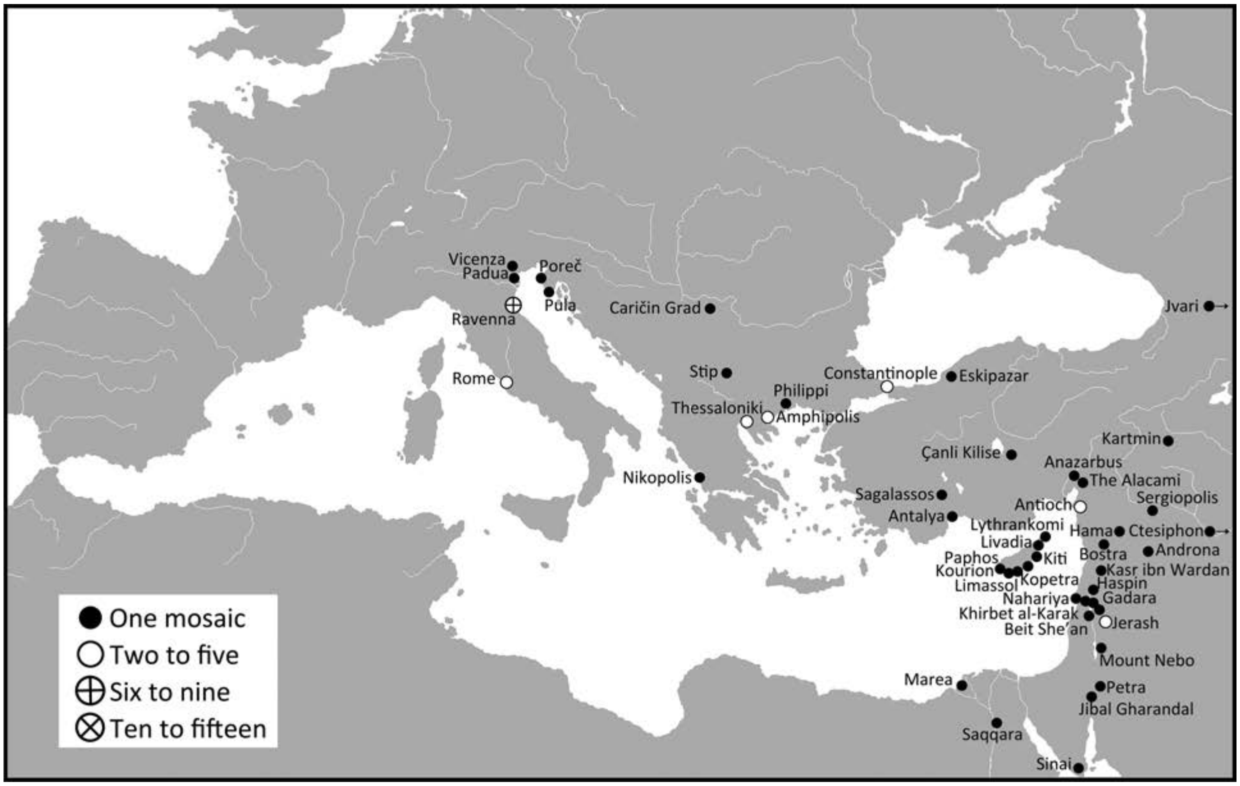
the great and good might imply, that it was reasonably accessible as a medium, and that the medium had a recognised prestige that made it perceived both as appropriate and as worth using. And within this story, although it is highly likely that more mosaics existed, there were also far more churches from where there is absolutely no evidence of mosaics. Mosaic was neither a specifically Eastern or Western medium: it does not divide easily into these two categories. Rather, in this period, it was a Roman Christian art form, one of many, and used across the empire by those wishing to assert both their Romanness and their faith. This was the case whether they were Roman or Visigothic, Latin- or Greek-speaking, pope, emperor or barbarian ruler, whether they were commissioning mosaics in Albenga or at Hosios David in Thessaloniki.

Chapter 7

EMPERORS, KINGS, POPES AND BISHOPS: MOSAICS IN THE SIXTH CENTURY

The material from the fifth century showed mosaic employed widely across the eastern Mediterranean and Italy. In both East and West, it was a medium seen as suitable for large and important churches, but nevertheless also appropriate for small ones. It was one of the fixtures and fittings that marked a building out as more than run of the mill, and even as having pretensions towards 'Romanness'. What is apparent in the sixth century (and the temporal break presented here is an artificial one) is a very similar employment of the medium, in terms of scale, patronage and distribution.

In terms of the quantity of mosaics made in the sixth century, as Map 3 shows, there is a drop in the fifth-century total from seventy-eight to sixty-three. It seems likely that there was a relatively consistent level of mosaic production from the fifth into the sixth century, just as from the fourth to the fifth. However, fewer new sixth-century mosaics are recorded in Italy: eleven rather than twenty-two. These are concentrated in the papal centre that Rome was increasingly becoming (three) and in the Ostrogothic capital and subsequent Byzantine base of Ravenna (six). In the Eastern Empire, a decent amount of physical material – five mosaics – survives from Constantinople. Though this is the first time it has appeared on the map, it is without doubt not the first time that mosaics were made in the city. Elsewhere in the empire, in Greece and the Balkans, in Cyprus, in southern Asia Minor and in the Levant, scatters of smaller churches offer evidence for the use of wall mosaic, indicating a wide distribution, easy access to the materials and artists, and a level of wealth among patrons willing and able to spend their money on churches with mosaics. Outside the Byzantine Empire, fragments of wall mosaic have also been found in the Sasanian capital city, Ctesiphon: how widely the medium was employed in the Sasanian world and whether it was a borrowing of a distinctive Roman art form is another question.[1]



Map 3 New wall mosaics in the sixth century.

Written sources add to the number of mosaics in cities such as Rome, Ravenna and Constantinople, and they also add a significant handful of sites to our overall knowledge, notably at Sana'a and Najran in southern Arabia, which was never a part of the Roman or Byzantine empires but where Byzantine emperors sought to establish a Christian toehold in the Arab world.[2] Textual sources also add to our knowledge of mosaics in major churches in the Eastern Empire (at Gaza and at Edessa for example), and in the West, in Italy (the church of S. Restituta and the *Ecclesia Salvatoris* in Naples) and further away in Chalons-sur-Saône, according to the sixth-century writer Gregory of Tours.[3] While these do not change the distribution maps in any major way, they suggest that traditions of mosaic-making were not yet totally lost from western Europe outside Italy – and underline just how much material seems to have been lost and how patchy and fortuitous the surviving information is. In many ways, because so many well-known mosaics survive, the temptation is to try and weave a coherent narrative around them, to look to associate them one with another and to explore the possibility of shared artists. But the overall quantity of mosaic from the period suggests that things were more complicated than such a narrative might suggest. Rather than a commonality of artists or sources for mosaics, I have superimposed a different framework, suggesting a diversity of both, but a more general understanding of the power and symbolism of the medium itself.

Discussions of sixth-century mosaics frequently centre on the mosaics of Ravenna and on the Emperor Justinian, and indeed on how the two might be related. But both were part of a much bigger picture, encompassing far more of the Mediterranean world in which the story of mosaics is significantly more fragmented than this focus

has implied. Consequently I open here with the mosaics at Kartmin in south-east Turkey.

MOSAICS IN THE EASTERN EMPIRE

At the monastery of Mar Gabriel at Kartmin in the Tur Abdin, mosaics survive on the lateral lunettes and vaults of the church, though the mosaic in the apse has been lost. These mosaics are all aniconic in design. In the vault (Fig. 82), grape vines spring from amphorae and form rinceaux patterns across the surface. In the centre is a medallion with a rayed, jewelled cross. Gold tesserae are used as a general background for the vault, and the amphorae are silver, decorated with gold. The branches of the vine are made from a coarse brown ceramic with green and blue glass intermingled, as well as pink marble and 'warm-coloured glass'.[4] Each lunette depicts a domed ciborium (an architectural feature usually located over a tomb, and so making reference to Christ's burial) resting on four columns with Corinthian capitals (Fig. 83). At each side of the dome is an arched lamp. Under the ciborium of the south lunette is an altar table with three vessels on it, perhaps a Eucharistic and so Christological reference; whatever was under the north ciborium is now missing. The background of these mosaics is again gold, but it is combined with details of a low hilly landscape and tree and plants. The gold tesserae are angled to catch and reflect light, evidence of sophisticated artistry. Silver glass is also employed, but the red paint applied on limestone for the image of the altar underlines that not all glass colours were available here, and that choices over what to use where had to be made. There is a clever use of gold for highlighting details, on the amphorae for example, and the border patterns of the vaults have some refined and elegant details – the use of darts of silver, light brown, pink, red, gold and their modulation into each other works very well, as do the silver tesserae radiating out into spaces between the stars of the inner border. In this enclosed church, with the materials available, the liberal use of highlights is effective, counteracting the darkness of the space. The church as a whole was well furnished: the walls, for



Figure 82 Grape vines scroll across the vault of the church of the monastery of Mar Gabriel, Kartmin, sixth century, around a gold cross. Silver is used extensively to highlight the star pattern and the chevrons.



Figure 83 A domed ciborium with lamps, altar and vessels; the ceramic tiles are a later patching. Mosaic in the south lunette of the church of the monastery of Mar Gabriel, Kartmin, sixth century.

example, may well have been revetted in marble, which elsewhere has been taken as an indication of considerable cost devoted to the building.

There is an unexpected element to these mosaics; today they exist in splendid isolation, an anomaly, seemingly miles from anywhere, certainly miles from any other surviving mosaic still on its wall. The nearest are perhaps those in Cyprus. But to the south and west of Mar Gabriel, a whole series of sites offer traces of mosaic in the form of fallen tesserae, and make it clear that the church was not alone in the region in its use of the medium. For example, to the south, Qal'at Sem'an, the church of the famous stylite saint Symeon the Elder was mosaicked.[5] There were sixth-century mosaics at Sergipopolis and Bosra. At Gerasa, material from sixth-century wall mosaics has been found in three churches, material including gold tesserae still in their setting beds, placed at an angle and with gaps between the rows, and silver tesserae. These fragments have been understood as a part of local Palestinian traditions, which were potentially also shared with the mosaics of St Catherine's Monastery on Mount Sinai.[6] At Gadara there is further material from ecclesiastical wall mosaics, and on the Wondrous Mountain just outside Antioch. Traces of secular wall mosaics have been found at Androna (al-Andarin), a large settlement on the trade route between Chalkis and Palmyra, in the form of a large, impressive bath, dated to perhaps 558–60 and built by a certain Thomas.[7] To the west, in Cilicia, at the Alacami, the presence of thick mortar on the walls of the church suggests the possibility of mosaic.[8] So rather than an outlier, Kartmin and its mosaics may well have been a part of a wider mosaic industry in the Levant and south-east Asia Minor. Although stylistic parallels have been sought for Mar Gabriel with mosaics in Rome, Ravenna and Constantinople (the Chapel of John the Evangelist in the Lateran Baptistery; the lateral placing of the mosaics in the lunettes reminiscent of the 'Mausoleum' of Galla Placidia; the rinceaux at Hagia Sophia), better comparators exist with floor mosaics from the area, most notably from Antioch.[9]

This patchy but widespread material opens up the possibility of regional mosaic workshops in

the Levant and the case that has been made for Syrian tesserae and craftsmen being sent to southern Arabia to work on the churches at Sana'a and Najran adds further weight to the proposal.[10] The region was a vital centre for the production of raw glass and for floor mosaics, and a wall mosaic industry offers some explanation for the quantity of the medium in this area and on Cyprus. The area was certainly wealthy enough to have supported one. Although Syria had suffered in the fourth and fifth centuries from natural disasters (earthquakes and fires) and military action (against the Persians to the east), this had led to rebuilding: Late Antique Syria was a prosperous, well-settled area, rich in both trade and agriculture, with many major cities and wealthy villages.

Nor was Mar Gabriel a remote site in the sixth century. It was a place of pilgrimage, certainly one worth imperial sponsorship; during Justinian's reign, it may have become an important military outpost.[11] It was founded in 397 and the church with its mosaics was built in 512, almost certainly under the patronage of the Byzantine emperor Anastasios I, who sent (or funded) workmen for the construction.[12] But it was a Syriac Christian monastery and both its imperial patron and its mosaics have been associated with Monophysitism, a theological dispute of considerable importance in the empire. The Council of Ephesos in 431, which had established the standing of Mary, had dealt primarily with the question of Christ's nature. The Council had not united the Church, however, and a further Council, that of Chalcedon (451), had engaged further with issues about the humanity and divinity of Christ. Chalcedon had defined Christ as one person with two natures, these inviolably united without confusion, division, separation or change in one person. This, the definition of the winners, did not settle the matter; discussion of Christ's divinity and humanity raged throughout the sixth century and led to a split within the Church. Christians in Egypt and Syria favoured instead what is known as the Monophysite ('one nature') position: the Incarnate Christ has one nature, but that nature is still of both a divine character and a human character, and retains all the characteristics of both, so God became man without changing his divine nature. It was a view shared by Anastasios. The monastery and its mosaics have also been associated with the Monophysite Syrian bishop Philoxenos of Mabbug, who was strongly opposed to the portrayal in corporeal form of incorporeal beings – Christ in his divinity and angels, for example. Consequently, the choice of aniconic imagery in the mosaics of the church seems to fit the context of this very particular theological doctrine. Anastasios' successors, Justin I and Justinian, were not Monophysites, and through their opposition to it Monophysitism also became a political struggle in Egypt and Syria, in part a protest against perceived oppression and authoritarianism from Constantinople, one in which increasing persecutions only turned the Monophysites further against the centre. As we shall see at Hagia Sophia in Constantinople, however, non-figural mosaic imagery was not the preserve only of the Monophysites and its use cannot be taken as automatic proof of Monophysitism.

Mar Gabriel suggests that mosaic was an important medium to patrons at sites across the empire. The mosaics of Hagia Sophia in Constantinople, over twenty years later, employed the same medium on a vaster and far more lavish scale: this is what an emperor could produce at home. They date to a period of ambitious imperial expansion. As emperor, Justinian's policies, internal and abroad, seem to have been designed to create a strong empire, one with a unified administrative system and following a single religious creed; this empire should also reunite West and East and hold sway across the whole Mediterranean. To this end, Justinian was involved in wars with Persia to the east and with

the barbarian kingdoms to the west. North Africa was occupied in 533–4, with Carthage as its administrative centre; much of Italy was occupied after a long and expensive war between 535 and 555. In the north, along the Danube, the status quo with respect to invaders was maintained through defensive garrisons and the payment of tribute. Though these campaigns briefly reconstituted the Roman Empire as one empire under God with one emperor, retrospectively they overstretched the empire, militarily and financially, and proved impossible to hold. The gradual loss of the empire's holdings occupied Justinian's successors in almost constant fighting in a bid to hold their borders as Justinian's territorial gains were lost, pushing the Eastern Empire back to its earlier boundaries and then inside those. Justinian's ambitions were not uniformly popular; his severe fiscal policies and fears about an increasing centralisation of power in the hands of the imperial government led to riots throughout Constantinople in 532 in which Justinian seems to have come very close to losing his throne and his city.

CONSTANTINOPLE AND HAGIA SOPHIA

The destruction caused by these *Nika* riots allowed, or compelled, Justinian to rebuild parts of Constantinople on a huge scale. More than thirty churches were built or reconstructed in his reign in the city, though he also extended his patronage of building work throughout the empire.[13] But the major surviving building work of the sixth century was his church of Hagia Sophia. It was the Great Church of Constantinople, recreated from the ashes by 537 – and then rebuilt once more between 558 and 562 after its dome collapsed. Justinian's Hagia Sophia was, quite simply, the most significant church in Constantinople, symbolic of the empire itself, a centre of ritual and ceremony, a refuge in times of trouble, the site of heaven on earth.

Something of its significance in sixth-century Constantinople is made apparent in a poem written by the palace official, Paul the Silentiary, and delivered before the emperor at the dedication of the church, celebrating the magnitude, glory and consequence of the church as a visual display of Justinian's imperial power.[14] It is clear from the building itself, from Paul's account and from later Byzantine narratives that no expense had been spared to make Hagia Sophia magnificent. Paul described the wonderful marbles brought in and the lavish gold and silver fixtures and fittings; the ninth-century semi-fictional *Narratio* of Hagia Sophia gives a taste of how the building was perceived in the ninth century, as a treasure-store containing crosses weighing 80 pounds of gold, an altar table of a priceless mixture of gold, silver, precious stones, pearls, copper, electrum, lead, iron, tin and glass, an ambo on which a year's taxes from Egypt (Egypt being always the wealthiest province of the empire) were spent; and as the greatest building of the world, constructed with the aid of God and his angels.[15]

Although no account makes much of the sixth-century mosaics, these survive extensively throughout the church. There may have been a figure of Christ in the dome but it seems more likely that it was a cross; and what may have been in Justinian's apse remains a mystery.[16] But what is still visible, in the narthex, the ground floor aisles and the galleries is overwhelming in its lavish gleaming gold. The surviving decoration is all aniconic, above all in the form of the cross, the fundamental Christian symbol of Christ, the light of the world, and Hagia Sophia, Holy Wisdom itself, personified, the insignia of the Crucifixion, of the Second Coming, of the salvation of humanity, repeated over and over throughout the mosaics.[17] Part of the reason for

this sort of imagery may well have been practical: the scale and the spaces in Hagia Sophia are not well designed for figural images, for the church is too large and the viewing lines too awkward. Part may have related to speed: the church was supposedly finished in five years, which would not have left a great deal of time for the installation of mosaics, if the timescale of the Baths of Caracalla (see above, Chapter 3) is anything to go by.[18] Part may have reflected religious controversies of the time about the nature of Christ and the validity of his depiction: it was, perhaps, a side-stepping of these, though Justinian was not one given to religious compromise. It will not have been about cost or artistry: given the resources of empire, what the emperor wanted was all that mattered.

The ornamental mosaics provide a glimpse for the first time of what imperial patronage in Constantinople could demand and what artists working for the emperor could achieve. These mosaicists drew on a long and sophisticated tradition of ornamental patterns from different centuries and from a variety of media, including fresco painting, floor mosaics and textiles.[19] They designed a repertoire of motifs based on geometric and floral patterns and designs, framed and marked out by ornamental borders which follow the architectural structure of the building. The main feature is the sign of the cross in different shapes and sizes and variously embellished with precious stones and pearls, found for example in the lunettes and barrel vaults over the entrances of the aisles (Fig. 84). The dominant colour is the gold background: it surrounds the red, blue, silver and green tesserae that create the various designs and patterns.[20] In the narthex, for example, the borders consist of interlocked dark blue and silver stepped patterns, framing a succession of green and gold jewels. In the aisles, the blue and silver tesserae are replaced by red and gold, and alternating silver swastikas and quatrefoils enclosed in blue squares and



Figure 84 Ornamental mosaics, south aisle vaults, Hagia Sophia, Istanbul, sixth century, showing eggs, crosses and knot patterns, as well as the basket capitals of the columns.

circles are added to the cross images. Other patterns include squares and roundels with stylised vegetable designs in the transverse arches separating the bays of the inner narthex, eight-pointed silver stars and multicoloured egg shapes with leaves.[21] In the galleries (Fig. 85) are rinceaux scrolls on a gold background and dark blue borders with eight-pointed gold stars constructed of overlapping squares running along the edges and beautiful spider web medallions in the soffits of the arches running in parallel to the lateral arcades.[22]

Glass was the medium of choice; silver and gold tesserae dominate the backgrounds. Although in twenty-first century Hagia Sophia



Figure 85 Ornamental mosaics, west gallery arcade, Hagia Sophia, Istanbul, sixth century: spider webs, scrolls and stars, silver and gold.

the decorative mosaics tend to get overlooked (and would all be the better for a clean), they would clearly have served to bedazzle and bewitch the viewer whose immediate attention would have been drawn to the fixtures and fittings of the church. The mosaics are cleverly designed. By accentuating the architectural surfaces and making no concessions to pictorial depth, they create a sense of unity and infinity within the huge building, enhanced by the endlessly repeated patterns, and held together through the ornamental bands. The surfaces act as canvases for the intense colours of the mosaic designs and the play of light that interacts with and bounces off the reflective glass surface. Everything we know about mosaic indicates that it would have been one of the media of choice, after marble, for use in Hagia Sophia, expected indeed of an emperor. But if mosaic was a medium that said anything about Romanness, then its use here also implicitly underscored Constantinople's position as the New Rome and Justinian's standing as emperor of the Roman world and heir to Constantine the Great.

Elsewhere in Constantinople, it is equally unsurprising that there were mosaics in many of the largest and most significant new churches built in the sixth century. They were used in Justinian's SS. Sergios and Bacchos and Hagia Eirene, and probably in his Holy Apostles. Other mosaics, such as those from St Polyeuktos and the slightly later Kalenderhane Camii, were the work of wealthy members of the high nobility, in rivalry or in emulation. Although these churches underline the wealth of decoration that existed in the city, we have almost no evidence of what any of these mosaics looked like, though it seems that St Polyeuktos

contained both figural and gold mosaics.[23] The only figural mosaic that survives from sixth-century Constantinople is a detached panel (1 × 1.3 metres) dated to the reign of Justin II (565–78) found at the Kalenderhane Camii, a Byzantine church since converted to a mosque.[24] It shows the Presentation of the Christ-Child by his mother in the Temple (see above, Figs. 35 and 36). Many of the coloured and gold and silver tesserae of the panel have decayed, in part through damp, so the panel now looks shabby, and because it is only ever viewed in close-up, it reveals just how crude and unfinished mosaic work can look. In good condition, mounted on a wall with a gold background, and presumably surrounded by other mosaics, it will have appeared considerably more impressive. But little is known about the church in which it was installed, and even less about the function of the room in which it was displayed and whether or not it was part of a larger narrative series. Mosaic work from the same late sixth-century period, including a small-scale figural scheme of bust portraits of Christ and various saints, is also known to have existed in the ceremonial rooms of the patriarchal palace, added to the south-west corner of Hagia Sophia; this was replaced in the eighth century.[25] The Roman tradition of imperial secular figural mosaic imagery continued in sixth-century Constantinople, for Justinian had his victorious self depicted in mosaic in the vestibule of the Great Palace known as the Chalke Gate.[26]

Justinian's use of the medium was not restricted only to his capital. At Justiniana Prima (Caričin Grad), the city Justinian founded to mark his birthplace, part of the aggrandisement of the site involved the use of mosaic. This is the only example known from Serbia and it seems solely a matter of imperial patronage. Imperial money also paid for several churches with mosaics outside of Constantinople, seemingly in important Christian sites (if only Prokopios had recorded how many of Justinian's 150 churches in the *Buildings* were mosaicked). The most complete survival is the apse mosaic in the Orthodox Monastery of the Burning Bush (now St Catherine's Monastery) on Mount Sinai. There had been a monastic community at the site of the Burning Bush since the fourth century, but at some point between 548 and 565, at much the same time that Hagia Sophia was being built, Justinian had constructed (probably provided the money for) a heavily fortified monastery to protect the monks from Bedouin raids.[27]

The apse mosaic still visible is contemporary with Justinian's church, and so presumably the result of his patronage; no traces of further mosaic work exist within the church.[28] It depicts the Transfiguration (Fig. 86): a bearded Christ, white-robed in his divine glory and within a mandorla, is flanked by Moses and Elijah, as Peter, James and John, awestruck below, throw themselves back from the radiance. Above, in the triumphal arch, angels in spandrels fly towards a Lamb in the centre, whilst above these, to the viewer's left, Moses loosens his sandals before the Burning Bush and, to the right, receives the Law. Below the angels are two medallion heads, John the Baptist on the left and Mary on the right – a version of the scene that becomes labelled as the *Deesis* ('Prayer') by art historians – and a band of busts, incorporating apostles, prophets, King David, saints and Deacon John frames the apse on all three sides. An inscription on the mosaic says that the work was executed in the days of Longinus, priest and abbot, and through the efforts of Theodore the Priest.[29] There are some striking differences in the portrayals of figures: the dramatic oblique eyebrows and eyes of the Baptist provide a marked contrast to the formal frontal portrayal of King David, for instance. There are also some mistakes: the gap between Peter's left foot and his body should have been filled in in green to represent the



Figure 86 The Transfiguration of Christ. Apse mosaic, Church of St Catherine, Mount Sinai, sixth century: the white Christ against a mandorla which gets lighter as it spreads outwards. Note the windows directly above the apse and the steepness of its curvature.

ground the apostles are located on, but is actually the black of the border. Although it is conceivable that these details represent the work of different artists, none is so great as to prove that the mosaic was the work of more than one team of mosaicists.[30]

This scene reflects very clearly the dedication and location of the monastery: Mount Sinai is where the Old Testament says that Moses encountered God in receiving the Law and is the site of the Burning Bush, one of the most precious relics of the monastery. The image draws some familiar Old and New Testament parallels: the old law of one Testament replaced by the new law of Christ. But it is not necessary to make comparisons to Rome as a result; this is a familiar theme within Christian art of the period. At Sinai, other themes inherent in the imagery concern Christ as the sun of Justice and the Transfiguration anticipating the Second Coming. The programme may reflect ideas about visions of God and spiritual journeys at

a pilgrimage centre; it may reflect the Eucharist; it may also reflect discussions about the nature of Christ and the intermingling of human and divine.[31]

Who made the mosaic is a vexed question. According to Prokopios, Justinian 'built' the monks of Sinai a church. What exactly this means is another matter: was the sponsorship purely financial, or did it involve materials, artists and workmen being sent from Constantinople? It is not possible to deduce from the mosaic alone where the mosaicists came from – for a start, there is not enough comparative material. They are unlikely to have been local to Sinai itself, where there could never have been enough work to support professionals. They may have been sent from Constantinople, though there is no proof of this. Equally, they may have come from the region, from Egypt, hired with Justinian's money. The mosaic at St Catherine's was not the only Egyptian wall mosaic of the period. Enough material, including gold tesserae, survives from Abu Mina in the fifth century, from the monastery church of Aba Jeremias at Saqqara (perhaps seventh century) and from a church at Marea near Alexandria to show that they too possessed wall mosaics, whilst Alexandria itself was a renowned Christian pilgrimage centre with some very big churches of its own, a wealthy city with a reputation for the production of art.[32]

The mosaics at Mar Gabriel, Hagia Sophia and St Catherine's do not fit together into any coherent narrative. They are three snapshots of imperial patronage, and whether they indicate anything more than a willingness of emperors to sponsor Christian foundations and so Christian art is debatable. The use of mosaic at all three suggests a perception of the medium as an appropriate one in these contexts, but how far that perception came from above or was visible at regional level is another matter. At both Mar Gabriel and St Catherine's, it is possible that imperial sponsorship relied on regional artists. On Cyprus, three further wall mosaics survive that have neither known patrons nor known contexts but which seem to support this picture of a regional mosaic industry, forming part of a case for the patronage of mosaic beyond the imperial.

MOSAICS ON CYPRUS

It has been said that almost every Late Antique site in Cyprus provides evidence of wall mosaic.[33] Three fairly complete ones survive, all from what appear to be small and inconspicuous churches: at Lythrankomi, Kiti and Livadia.[34] At Lythrankomi, where the Church of the Panagia Kanakaria has been dated to the late fifth century, the apse mosaic is said to be perhaps ten to twenty years later.[35] The apse held an image of the Mother of God and Child in a mandorla on a gold background, flanked by angels and with a border of apostles in roundels (Figs. 87 and 88). This particular mosaic (if correctly dated) is the earliest remaining mosaic image of the Mother of God with the Christ-Child from within the Byzantine Empire. How far it provides an idea of what those that are known only from literary texts may have looked like, including the Empress Verina's fifth-century mosaic in the Chalkoprateia church in Constantinople, and in the West the apse at Capua Vetere, depends on how these have been reconstructed.[36] However, as discussed in the previous chapter, a picture of Mary with her Child was an image of the Incarnation of Christ, the tangible birth of God to a human mother, and the visibility of Christ as man and God, an issue important throughout the Christian Roman world. At Lythrankomi, therefore, the mandorla, the sign of divine glory, that encloses Mary and her Child, evokes divinity, in the same way as it does in enfolding Christ in the scene of the Transfiguration at St Catherine's.[37] The depiction of the Lythrankomi Mother of



Figure 87 View of the apse of the Church of the Panagia Kanakaria, Lythrankomi, Cyprus, conventionally dated to the sixth century. The architecture of the church interior successfully obscures much of the mosaic.

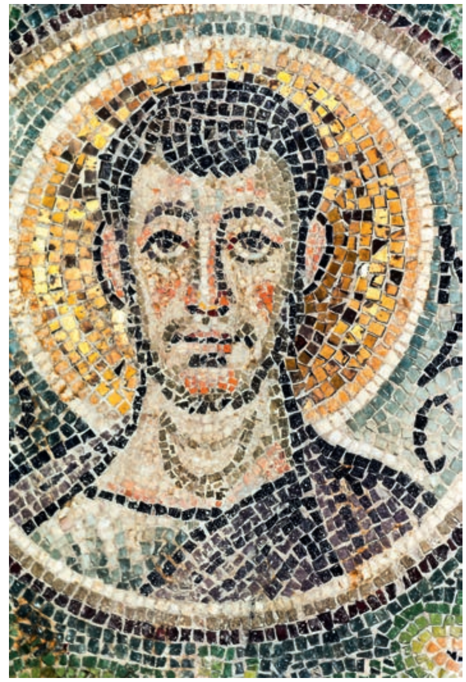


Figure 88 Head of the Apostle Thomas from the apse mosaic of the Church of the Panagia Kanakaria, Lythrankomi, Cyprus, sixth century; not chequer-boarded but highlighted in sharp orange.

God consequently has been associated, as with her image at S. Maria Maggiore in Rome, with the decrees of the Church Council of Ephesos (431) establishing the role of Mary as *Theotokos*.[38]

The second extant Cypriot mosaic again depicts the Mother of God and her Child. This is the one still in its original setting in the small church of the Panagia Angeloktistos at Kiti, though the church itself has been remodelled (Fig. 89). The mosaic is undated though it has been put into the fifth- to seventh-century period. In contrast to Lythrankomi and its depiction of Mother and Child in a circle of divine light, here, at Kiti, Mary, labelled as 'Hagia Maria', 'Holy Mary', a sign of the sanctity of the human woman chosen to bear Christ, a vision in red, stands on a footstool, against a gold background, clasping Christ and attended by two angels holding staffs and globes, and with magnificent peacock wings in green and blue.[39] The lack of any sort of detail in the background – there is not even a strip of green along the bottom – perhaps locates this in a purely heavenly space. The decorative border, showing the fountain of life, birds, animals and beribboned parrots, resembles both that at Lythrankomi and also motifs found in floor mosaics in Antioch. But the modelling of the faces, set in patterns and contours to give precision and an impression of relief, and with the use of chequerboarding for shading, is very different from the technique used to create the figures at Lythrankomi. In addition, the marble tesserae used in Kiti are considerably smaller. Some of the technical details are very sophisticated indeed – the hands of the angels holding translucent globes were discussed earlier – and overall, this is a breath-taking mosaic (though it



Figure 89 View of the apse mosaic, Church of the Panagia Angeloktistos, Kiti, Cyprus, conventionally dated to the sixth century, giving a sense of just how small this mosaic is.

could do with cleaning and better illumination). No other mosaic images exist at Kiti and it is unclear, as at Lythrankomi, whether there was ever any more mosaic in the church.

The third instance comes from the Church of the Panagia Kyra in Livadia, a very small church – the apse is only 2.1 metres in diameter – in north Cyprus. The fragments of mosaic offer another take on Mary. Here she is shown without her Son, standing alone, hands upraised in prayer (Fig. 90), an image more expected in eleventh-century mosaics than sixth, though the surviving traces of a garland and feet suggested that, as at Kiti, angels flanked the apse. Tesserae in gold, silver and blue glass survive; unlike Kiti, the red tesserae seem all to be painted marble (some of the red tesserae at Lythrankomi are also painted marble). Marble tesserae were also used, notably for flesh parts but also in other areas. Some of these marble pieces are very small indeed and

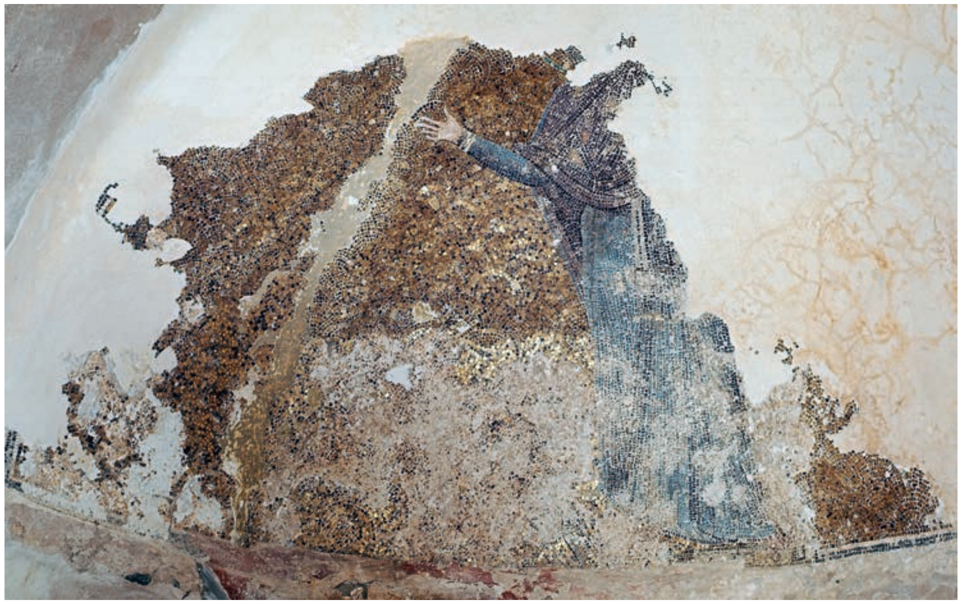


Figure 90 Apse mosaic, Church of the Panagia Kyra, Livadia, Cyprus, conventionally dated to the sixth century. Mary has a completely different pose from the other two Cypriot examples, and the gold background is created with a trefoil pattern.

allowed the flesh to be modelled with great subtlety. The gold background is set in a rising fish-scale pattern, a design used in floor mosaics but not preserved in gold backgrounds elsewhere until the fourteenth century and the Deesis panel in Hagia Sophia in Constantinople. The church itself is twelfth century and has been described as a typical Middle Byzantine church.[40] However, Megaw, who saw the image at first hand in pre-partition days, felt that the apse and its mosaic were earlier than the church, perhaps very late sixth or early seventh century. He compared the figure of Mary with the lost seventh-century mosaic of the Church of the Dormition in Nikaea, which he consequently presumed to have been an Orant Virgin – perhaps wishful thinking.[41]

Intriguingly, all three churches are very small and of relatively rough and ready construction. They do not appear to have been large, wealthy foundations in the same way as was the Cypriot episcopal complex of Kourion (from where fragmentary mosaics were discovered in excavation).[42] Dating the mosaics of all three churches is contentious. Conventionally, all Cypriot mosaics have been dated to before the mid-seventh century. This was because it was believed that Arab raids on Cyprus began in the 640s and devastated the island, thereby affecting the peaceful and presumably wealthy economic and social conditions under which it is assumed people would build churches and fill them with mosaic.[43] Whether this last belief is a valid one is disputable; events in fifth-century Rome hint not. However, recent scholarship also suggests very strongly that the Arab raids on Cyprus were far less damaging than had been believed, and that life and trade on the island continued relatively peacefully and prosperously into the eighth century.[44] As will become apparent, this also fits with revisions to our understanding of what happened in the Christian Levant with the Muslim conquest of the seventh century. Removing the 640s cut-off point reopens questions about the validity of the dating of these mosaics, opening the possibility of their being later. Only renewed close examination of the three mosaics will help with this, but once again the problems inherent in an understanding based primarily on style are apparent.

The relationship of the three mosaics to each other and to other mosaics has also been keenly

debated; in particular the focus has been on the emphasis on the Mother of God that this chance survival suggests. Most immediately, it is clear that both apse mosaics and the image of Mary offered scope for considerable variations on a theme. We have already seen how, in S. Maria Maggiore in fifth-century Rome, the mosaic images of Mary with the Christ-Child appear to refer to the Acts of the Council of Ephesos in 431 relating to clashes about the nature of Christ, a debate that continued into the Council of Chalcedon and its disputed definition of the humanity and divinity of Christ. In terms of these Christological arguments, there was a knock-on effect on perceptions of Christ's mother: images of the Mother of God with her Child invariably reflected a statement of his Incarnation and a comment on the relationship between his humanity and divinity; in the process, they also extolled Mary.[45] If a date in the fifth to seventh centuries proves accurate for the mosaics, then, given Cyprus' proximity to the Syrian coast and the Monophysites, with their different views on the nature of Christ and so of Mary's role, images of the Virgin and Child made significant doctrinal statements on behalf of Orthodoxy. Even the use of the mandorla (at Lythrankomi) and of the angels may roll into these theological debates, for both appear as indicators of Christ's (not Mary's) divinity. But because the Church in Cyprus also had a very strong sense of local identity (it had claimed independence from the patriarch of Antioch at the Council of Ephesos and saw itself as autocephalous), the images may also reflect local understandings of major doctrinal debates. But the presence of the Mother of God is no guarantee of date: her image, in a variety of poses, was continuously popular in the apse.

The Cypriot mosaics, as with those at St Catherine's, have been used to suggest the influence of art and artists from Constantinople on the provinces of the empire. Although Megaw and Hawkins, who published Lythrankomi, claimed that it was conservative and provincial in its iconography for a mosaic made in the early years of the reign of Justinian I, they went on to say that it was metropolitan in its theme and composition. Elsewhere Megaw was to describe the mosaics of Kiti and of the Rotunda in Thessaloniki, between which he drew some unconvincing stylistic parallels, as examples of 'pure Constantinopolitan art'.[46] But simply because all three depict Mary, that is no reason to see them as related in time. Indeed, in terms of their mosaic style, the mosaics do not particularly look like each other, not in the same way that the sixth-century mosaics of S. Vitale in Ravenna and at Poreč share a resemblance: chequerboarding, for example, is used extensively in faces at Kiti but not at Lythrankomi, where white stone is used in a very distinctive fashion; the garments of the Christ-Child are modelled differently in both; Livadia has a very distinctive background and quite detailed fold lines in Mary's robes. How far this means different artists, how far it reflects the various materials clearly available to the mosaicists, how far it relates to distinct scenes in different-shaped apses is another matter altogether.[47]

Sixth-century Cyprus was a wealthy province, with good ports, rich agricultural land and mineral deposits, notably copper, administered from Antioch, and an important way station between the east and west Mediterranean. Urban life flourished on the island. What the three surviving mosaics and the quantity of scraps and tesserae throughout Cyprus suggest is that here, as with St Catherine's and Mar Gabriel, a local mosaic workshop or workshops, perhaps derived from the provincial capital of Antioch, perhaps even based on the island, could well have been supported. Obtaining the raw materials, whether glass or tesserae, would not have been overly problematic: Cyprus was very well placed to import material from the glass factories of the Levantine coast.[48]

BYZANTIUM BEYOND CYPRUS

There may equally have been a regional workshop or workshops in or near Thessaloniki. Major mosaics were commissioned in the city in the fifth century and some evidence survives for sixth-century mosaics being installed in St Demetrios. These are a series of mosaic images that ran along the colonnade the length of the north inner aisle of the church, including what is known as the 'Maria cycle'. They were destroyed by the fire of 1917 and are known only from photographs and a series of watercolours made before this fire. This makes their interpretation tricky, since it also seems likely that they went through restorations before and after a fire in the church in the seventh century.[49] The surviving images depict an assortment of saints, often in positions of prayer, together with several smaller figures being presented to the Mother of God and her Child or to St Demetrios. The final surviving spandrel, for example, shows Demetrios in front of a scalloped niche with two medallion portraits, one on either side. To the saint's right, two small figures raise their hands; to his left a richly dressed man also does, making an offering according to the inscription 'As a prayer for one whose name God knows.' In a final scene at the east end, Demetrios is shown standing in a four-columned structure; to the left is a group of three women, a beardless man and a young girl with a gold cross on her forehead offering doves; the couple behind may be her parents. Behind them is some sort of shrine, and at the apex of the seventh arch there is a medallion of Christ who looks towards Demetrios. The right-hand side of the image has largely gone. The inscription associated with the scene reads: 'And you, my lord St Demetrios, aid us your servants and your servant Maria whom you gave to us.' On the basis of this inscription, the child has been taken to be 'Maria' and four of the scenes interpreted as a set recording her infancy and childhood, though these need not be one continuous scene but stories of four different girls with the crosses on their foreheads marking them as divinely favoured.[50] The mosaics seem similar in intention to those of the fifth century, votive offerings and pleas for saintly intervention and assistance. Whilst their presence in the church does imply that mosaics continued to be made in Thessaloniki, the evidence more widely for the use of wall mosaics in northern Greece in the sixth century is strong. At least six further examples, including at the big (55 × 26 metres) Museum Basilica at Philippi, are known.[51]

Elsewhere in the empire, as Map 3 highlights, evidence for wall mosaics can be found at a variety of sites. At Canli Kilisse in Cappadocia, for example, fragments of mosaic in the collapsed vaulting of the sixth-century North Settlement church provide what seems to be the first evidence of mural mosaic in the region.[52] To the north, traces of mosaic dating perhaps to the second half of the sixth century were found at Jvari (evidence of a cross in a mandorla in the apse) in Mcxeta, in modern Georgia; the *Life of St Eutychios* records the saint healing a mosaicist in Amaseia in the Pontos, who was attacked by a demon as he removed a mosaic of Aphrodite from the wall, a story that also suggests the reuse of the materials of old mosaics.[53] And physical evidence of tesserae has been recovered from Hadrianopolis in Paphlagonia.

What might this distribution of glass wall mosaic across the empire, in Cyprus, in Egypt, in northern and southern Asia Minor and in Georgia indicate? To my mind it stands as a challenge to Kurt Weitzmann's claim in the context of the quality and medium of the mosaic at St Catherine's that 'We cannot say with certainty where this artist [of the St Catherine's mosaic] came from, but there is a high degree of probability that he came from Constantinople.'[54] That artist may have done so, but the truth is that we do not know. Whilst (for once) there is

physical evidence for a Constantinopolitan mosaic-making industry at Hagia Sophia, St Polyeuktos and the Kalenderhane Camii in the sort of Roman and imperial traditions that are assumed to have been present in the city since the fourth century, this does not mean that the city was the world's centre for mosaic-making. The evidence for wall mosaics is so widely spaced geographically and chronologically that there is no reason to assume that they were in any way connected. Rather, the existence of mosaic workshops in places in addition to Constantinople would go some way to explaining how mosaic came to be so widely spread a medium, used in so many smaller, non-imperially sponsored churches, and also in secular buildings such as Thomas' bath in Andona. It seems highly likely that there were mosaic workshops in Constantinople, but equally that mosaic artists continued to live and work in Thessaloniki, the Levantine coast, Cyprus and perhaps Alexandria. This in turn implies a couple of things. One is that patrons were wealthy and willing enough in these different areas to commission mosaics, hinting at a widespread belief in it as an acceptable (and probably prestigious) medium to use. The second is that the materials for mosaics were accessible to those with the money for them, and this indicates that the relevant trade routes in the Levant still existed and were still used. What the very fragmentary data intimates is a medium and a skill that travelled, and travelled more widely than we have appreciated.

MOSAICS IN THE WEST, MAINLY ITALY

What then of the West? The inference of Map 3 is that wall mosaics in the West outside Rome and Ravenna were few and far between. The scattered small churches of the previous century, such as Albenga or Casaranello, are less visible, though the survival of fragments of mosaics from the small votive chapel of S. Prosdocimus in the basilica of S. Justina, Padua, from the chapel dedicated to St Matrona in S. Prisco near S. Maria de Capua Vetere, and the chapel of S. Maria Mater Domini at SS. Fortunato e Felice at Vicenza, suggest that such a use may have continued outside Rome and Ravenna. However, these two cities appear to have had a considerable influence on other surviving mosaics of the period, including S. Prosdocimus, where links to Ravenna are apparent in the make-up of the tesserae.[55]

For their part, the mosaics of Rome and Ravenna convey many of the same impressions as those of the previous century: a bid on the part of patrons to foster the ideals and traditions of empire, underlining Romanness and power. In Rome, this was in great part the role of successive popes. In Ravenna, however, the patronage of mosaics may have stood in contrast to Rome. In the early part of the century, the great patron of mosaics was the Ostrogothic ruler Theoderic, followed later by the Byzantines, who held Ravenna as their stronghold and centre of government in Italy. Both were backed by local bishops whose support seems often to fit into an assertion of local power and authority in the face of Roman claims to supremacy.

Theoderic's mosaics in Ravenna offer a commentary on how we might interpret his ambitions, the very fact that he commissioned mosaics being a statement in itself. The fifth century had seen the slow fragmentation of the Roman Empire in the West into a series of barbarian kingdoms maintaining greater or lesser aspects of Roman rule and cultural traditions. In Italy, in Rome itself, the 'old' aristocracy and the newer papal administration seem to have filled something of the vacuum, but more widely in the peninsula it was the barbarian military leaders who held sway. In the early sixth century, the most successful and powerful of these was

Theoderic. He had spent a long time, as both a child and a young man, as hostage and then favoured imperial official in Constantinople, even becoming consul under the late fifth-century emperor, Zeno. This exposure to the Eastern Roman Empire and his familiarity with the ways in which its emperors ruled seem to have influenced his own construction of authority. Theoderic returned to the Ostrogoths, becoming king in 488, and invaded Italy with Byzantine encouragement.[56] Odoacer, who had deposed the last Western Emperor, Romulus Augustulus, and who called himself King of Italy, was defeated and killed in Ravenna by Theoderic in 493, leaving Theoderic effectively as leader of the remains of the Western Roman Empire, or what was actually the kingdom of the Ostrogoths. By the time of his death in 526, Theoderic was recognised as king in both Rome and Byzantium and his kingdom was a considerable one, taking in Italy, Sicily, the western Balkans and Spain, as well as having dynastic connections and influences across the different kingdoms in Europe – the Burgundians, Visigoths, Vandals and Franks. Under much of Theoderic's rule, Italy prospered as he enforced peace and collected taxes.

THEODERIC'S RAVENNA

Although he settled his Ostrogoths in Italy, Theoderic gained some support from Rome, both its clergy and aristocracy, in part by leaving the city largely independent. Instead, the king made Ravenna his main residence, and centred the administrative system of the kingdom, based on imperial bureaucracy, in the city. As a result, Ravenna became even more important, wealthy and populous, growing in size to perhaps 10,000, its greatest extent, and filled with a range of new buildings supplementing those of the previous century, from palaces and walls to aqueducts and granaries. Symbolically, on its coins and in its mosaics, Ostrogothic Ravenna was compared to Rome and to Constantinople, until Theoderic's dynasty came to an end in 540. It is clear that Theoderic's building programme in Ravenna was intended to promote a public image of the king as renovator, as the successor of the Roman emperors and as creator of a royal capital modelled on but also equal to Constantinople and Rome.[57]

Theoderic's mosaics in Ravenna underline these aspects of his rule and his *romanitas*. As previous emperors had both in the West and in Constantinople, he utilised mosaic in a secular context. In his palace in Ravenna was a mosaic showing the king paired with personifications of Rome and Ravenna; he was also depicted in mosaic in his palaces in Pavia and Verona.[58] His mausoleum too may have contained mosaic, in the tradition of that imperial use of the medium.[59] Like the Christian Roman emperors in Rome and Constantinople, Theoderic built churches throughout his city. Like many of the Christian barbarians who invaded Italy, he was an Arian Christian and, just as Monophysitism was influential in the East in the sixth century, so Arianism had an impact in the West.[60] Theoderic founded churches for his Arian Christians in Ravenna. These included a church, which may have been attached to a palace, dedicated to Christ but now known as S. Apollinare Nuovo, and a major episcopal complex of cathedral, called the Anastasis (now the Church of Santo Spirito), baptistery (known now as the Arian Baptistery, to distinguish it from the fifth-century Neonian or Orthodox Baptistery), and bishop's palace for the Arian bishop of Ravenna.[61]

Though it is very probable that both the cathedral and the bishop's palace contained mosaics, only two mosaic programmes survive from Theoderic's churches: those of the Arian Baptistery and S. Apollinare Nuovo. The Arian Baptistery (*c.* 500–25), like the Neonian

Baptistery of some twenty-five years earlier, echoes the Roman trend for octagonal baptisteries.[62] Inside, the mosaics (which have been restored) comprise a central roundel depicting Christ baptised by St John, with a personification of the River Jordan seated next to him and a dove dive-bombing Christ from above; the twelve apostles process around the roundel in two lines, heading towards an empty throne.[63] Similarities in imagery if not in style with the Neonian Baptistery are obvious, and much scholarly time has been spent on trying to see if the differences in the iconography might say anything about doctrinal differences between Arian and Orthodox Christians. This has not been terribly profitable, if only because, doctrinally, the meanings and rituals of baptism were the same for both. Significantly, the mosaics were not altered when the baptistery was reconsecrated for use by the Orthodox, demonstrating that they saw no problems with the images.[64]

Things are different at S. Apollinare Nuovo, where the mosaics probably date to the 520s. Here, large-scale alterations to the mosaics took place after Theoderic's death, though these seem impelled as much by political as by theological differences.[65] The church is a three-aisled basilica, very similar in layout and dimensions to Galla Placidia's earlier imperial foundation of S. Giovanni Evangelista, and similarly a luxurious and costly building, filled with marble columns, capitals, the chancel screen and the ambo. It was located close to Theoderic's palace and presumably Theoderic worshipped here: the imagery is often interpreted in terms of the connection between the church and the court. Only the mosaics of the walls survive, for the original apse collapsed in an earthquake in the eighth century and there is no record of what was depicted there.

The mosaics of the nave are set in three zones, which match each other across the church. The highest levels depict scenes from the life of Christ alternating with shell niches with doves and crosses: on the north side are thirteen miracle and parable scenes from Christ's mission; on the south side, scenes of Christ's Passion, from the Last Supper to the Doubting of Thomas (though without the Flagellation and Crucifixion). The second level on both sides shows sixteen standing male figures, who may be prophets or biblical authors or members of a heavenly court – nothing identifies them. The mosaics of both of these registers are Theoderic's. Below them, however, the lowest level has been changed. What it originally depicted is unknown. What it now shows are two saintly processions. On the north wall (Fig. 91), twenty-two female saints emerge from the port of Classe and advance towards an enthroned Virgin and Child who are flanked by angels and adored by the Magi. On the south wall, twenty-six male saints come out from the city of Ravenna from a building labelled as *Palatium*, 'Palace', and parade towards Christ.[66]

Alterations are most obvious in the mosaic of the palace. Detached hands and arms are apparent on several of the pillars (Fig. 92). These must once have been part of the depiction of standing figures, perhaps in orant positions with their arms stretched up and out, in what are now spaces between the pillars filled by knotted curtains and gold tesserae. Most plausibly these figures were the king and his household, hence their removal when Ravenna became both a Byzantine and an Orthodox preserve in the late sixth century.[67] The presence of images of Theoderic in S. Apollinare Nuovo would be unsurprising: Galla Placidia had placed depictions of herself and her family in S. Giovanni Evangelista and in S. Paolo *fuori le mura* in Rome; in Constantinople, Leo and Verina were depicted in the Chalkoprateia Church; later, Justinian had himself pictured in the Chalke in Constantinople. Theoderic, the equal of emperors, is unlikely to have missed this imperial trick.



Figure 91 View of the mosaics of the north aisle, S. Apollinare Nuovo, Ravenna, sixth century: the female saints headed by the Magi; prophets above them; and scenes of Christ's miracles (the Raising of Lazarus is to the left of the pillar) above that.



Figure 92 Details of the palace from the south wall of S. Apollinare Nuovo, Ravenna, sixth century, showing the hands on the columns and the curtains that replaced the bodies. There are lovely little details of victories or angels holding garlands in the spandrels above the columns.

But what might these mosaics have said to inhabitants and visitors to Theoderic's Ravenna? The presence of Ravenna and Classe (where conceivably, on a Roman model, Jerusalem and Bethlehem might have been shown) suggests their importance to Theoderic: his city; his port.[68] The idea of narrative scenes high on the church walls is one that is found in Rome in St Peter's and S. Paolo *fuori le mura*, as well as at S. Maria Maggiore where they survive. At St Peter's and S. Paolo, the scenes depicted the lives of the two saints; at S. Maria Maggiore, the Old Testament images carried Christian overtones and evoked the theme of the people of God seen elsewhere in that church. At S. Apollinare, the scenes focus on Christ, showing him as miracle worker and as the bringer of salvation. Intriguingly, the Ministry scenes do not occur in their New Testament order, whilst the Passion cycle moves from east to west, and sometimes the scenes clearly pair across the aisle: the two scenes immediately flanking the apse are the Wedding at Cana and the Last Supper, which both reflect Eucharistic elements. In his ministry, Christ is shown beardless, but at his Passion, bearded. Although the iconography of the mosaics is not unusual and can be seen across a range of media, much scholarly effort has gone into seeking a specifically Arian theology in the images, most notably in the context of this changing facial hair. It has all been remarkably inconclusive.[69] Both bearded and beardless Christs are found in Orthodox imagery and attempts to suggest a doctrinal meaning for the shift remain unconvincing. Furthermore, though images of Christ may have carried an Arian element, perhaps through showing Christ the son of God working miracles redolent of his divinity, Orthodox Christians would also have seen in them the Incarnate Christ, son of Mary. As with the mosaics of the Arian Baptistery, these scenes of Christ clearly did not offend their Orthodox audience for, unlike whatever was going on in the lowest register, they remained untouched by sixth-century hands. Rather, the changes made to the lowest level of mosaics in the later sixth century reflect, in their removal of probable images of the king, the changing political situation.

Indeed, Theoderic allowed Orthodox building in his city. One prominent example, the Archbishop's Chapel (Capella Arcevescovile), was the work of the Orthodox bishop, Peter II (494–520).[70] This cruciform chapel was lavishly decorated: it was revetted with marble; the barrel vault was decorated with a mosaic of lilies, disks and birds on a gold background and the monogram of Bishop Peter, evoking both floor mosaics and Galla Placidia's 'Mausoleum'; the apex of the vault had a gold chrismon against a blue background in a medallion held by four angels, between whom are the four evangelist symbols and multicoloured clouds (seen also in Rome). Although the apse mosaic is lost, it has been reconstructed with gold and silver stars around a cross, rather like the 'Mausoleum' of Galla Placidia, and with roundels of saints. The only surviving lunette mosaic, above the door, shows a youthful Christ on a gold background as a warrior trampling on a lion and a serpent (the basilisk and asp of Psalm 91:13), and holding a book and a long cross over his shoulder.[71] The churches and the decoration of Orthodox and Arian Ravenna did not diverge wildly in their materials or themes, and are unlikely to have differed much either in materials or in workmen and workshops.[72]

As a patron of churches and mosaics, Theoderic was unlikely to have been playing sophisticated iconographic games with doctrine: nothing known of him suggests a theological bent. Accordingly, something of the messages of his mosaics can be interpreted in very straightforward ways. The prestigious projects of the buildings and churches of Ravenna with their mosaics and other decoration and lavish

fixtures and fittings said less about overt Arianism and dealt more with explicit political assertions about the status of Theoderic and his capital. Although there were local workshops producing sarcophagi and manuscripts, Theoderic is known to have brought workmen and artists from Rome; the local marble workshop seems to have been influenced by Constantinopolitan styles; and there was a considerable trade in Ravenna in imported materials, notably Proconnesian marble.[73] But Theoderic's Ravenna was not conceived as a lesser echo of great glories, any more than Theoderic rated himself as less powerful than the emperor in Constantinople or the bishop of Rome, and his city as any less important than Rome or Constantinople. It was intended to match or supersede these capitals, just as Roger II of Sicily's Palermo was expected to do so six hundred years later. Whilst Theoderic was presumably influenced by his memories of Constantinople, it also seems likely that his actions were prompted by what he saw in Italy. He considered himself as a successor to the Roman emperors who had ruled in the West, and, without spending much time there, he paid attention to rebuilding public buildings in Rome, including the imperial palace on the Palatine, the Senate House, the Theatre of Pompey, aqueducts, sewers, granaries and walls.[74] In this context of what Ravenna stood for and of how Theoderic saw himself, his use of mosaic was perhaps one of the medium before the message. He commissioned mosaics because that was what emperors and Romans did, and because his city was set to rival both Constantinople and Rome. He was successful, for as Ravenna laid down the gauntlet to Rome, so Rome responded: the building works of the early sixth-century popes, Felix, John and Pelagius, were not simply about Rome but also concerned to assert or reassert Roman, and specifically Christian Roman, pre-eminence.

AFTER THEODERIC: 'BYZANTINE' RAVENNA

After Theoderic's death, Ravenna continued to be a significant city – for the Byzantines. New political configurations in Italy and the Eastern Empire changed the shape of the world. The Arian emperor Anastasios I was followed by the Orthodox Justin I, less well disposed towards Theoderic. The Church in Rome, which had been in dispute with Constantinople, and therefore favourable towards Theoderic, was reconciled to the East and its leaders were also increasingly anti-Arian. These factors together led to a gradual crumbling of the Ostrogothic kingdom after Theoderic's death in 526, setting the scene for a period of turbulence, war and instability in Italy. Theoderic's grandson was proclaimed king with his mother, Amalasuntha, as regent. The child died in 534 and so she proclaimed herself queen in association with her cousin, Theodahad; by 535, she had been murdered by him. The emperor, Justinian I, seized this as a pretext to extend his ambitions of empire and to invade Italy, for Amalasuntha had turned to him for support. In 536, Justinian's general, Belisarius, entered Rome, and Ravenna was finally captured in 540. Significantly, it was not sacked but established as the Byzantine centre of administration (the exarchate) in Italy, a role it retained into the seventh century: logistically and in terms of ease of communications, as Theoderic himself had appreciated, it was on the right side of the Italian peninsula for Constantinople. The Byzantines continued to use the city as their military base in Italy throughout the rest of the sixth century, and indeed into the seventh and eighth centuries. Local officials also became increasingly powerful; additionally, in their almost unceasing struggle to assert their independence from Rome, the bishops of Ravenna benefited from their proximity to the Byzantine government, for both shared the same agenda: to establish the primacy of Ravenna.

If new building work is a sign of prosperity, then Ravenna continued to flourish. There is little trace of any building by the series of exarchs (effectively provincial governors) appointed from Constantinople. But there is much material revealing that despite the political turmoils of the next twenty years the local bishops continued to build. Bishop Ecclesius (522–32) was a key figure, beginning a major rebuilding programme in 526 under Amalasuntha. He began the construction of the important Ravennate churches of S. Maria Maggiore (where the mosaics included an apse mosaic of the Virgin and Child, with Ecclesius himself offering them the church) and of S. Vitale (establishing this saint as a prominent local martyr), sponsored by the pious and wealthy banker Julianus Argentarius.[75] Ecclesius' successor, Ursicinus (533–6), had Julianus' support at S. Apollinare in Classe and Julianus was also a patron of S. Michele *in Africisco* with his son-in-law. (This was dedicated in 545; the apse mosaic showed Christ, beardless, holding a cross staff and book, and flanked by Michael and Gabriel, all on a gold ground. Cosmas and Damian were in the pendentives of the apse space and on the arch of the apse was a bearded, enthroned Christ in the centre, angels to either side, seven in all.)[76] Victor (bishop 538–45) completed the decoration of another baptistery for the Petriana complex, and also a bath complex with gold mosaic. Such churches and mosaics served to highlight the piety, and worldly standing, of these bishops.

The importance of the position of bishop of Ravenna was such that both the emperor and the popes sought to appoint their own men to the post. Bishop Maximian from Pola (546–57) and then Agnellus (557–70) and Peter II (570–8) were all supporters of the empire. In contrast, Peter's two successors, one a direct nominee of the pope, were from Rome. By 600, the archbishops of Ravenna had managed to get themselves near the top of the Italian ecclesiastical hierarchy. Maximian himself had been the first archbishop of the city, a promotion that came from Constantinople, not from Rome, and was aimed as a deliberate blow at Pope Vigilius who had opposed Justinian's edict against Monophysitism, and been hauled off to Constantinople in 546 as a result. Whilst Milan and Aquileia, the two other major Italian bishoprics, had upheld Vigilius, Maximian in Ravenna had offered support to the emperor. This promotion was his due reward.

Maximian played a significant role in shaping an image of the see: he produced a history of it and several commemorative pieces with depictions of sequences of Ravenna's bishops. He claimed numerous local saints for the city.[77] He also completed, decorated and dedicated a whole series of churches including S. Vitale and S. Apollinare in Classe. Of these, the church of S. Vitale, deliberately located close to the 'Mausoleum' of Galla Placidia and her church, is perhaps the best known. It was certainly important, but was a bishop's church, not an imperial church and not the cathedral church of the city. The building was begun by Ecclesius, worked on by Victor, and completed by Maximian, who took much of the credit.[78] The plan is unusual: the building is octagonal in shape, with a dome, an ambulatory, a passage, forming an outer shell, a high presbytery with an apse and galleries on seven of the eight sides. All seven exterior walls have doors.[79] There is much debate about how much this plan might owe to Constantinople; one frequent comparison is with the church of SS. Sergios and Bacchos, also known as 'Little Hagia Sophia' because of its resemblance to that church. However, since SS. Sergios and Bacchos was begun at much the same time as S. Vitale, it is unlikely that either building really influenced the other. Ecclesius and his successors may in fact have been looking closer to home in order to strike another blow in the battle for regional supremacy. Vitalis was a Milanese saint and the

establishment of his cult in Ravenna was part of a deliberate and successful attempt to take him away from Milan and to assert Ravenna's standing: the architectural associations that can be made between his church in Ravenna and S. Lorenzo in Milan were surely not accidental.

The church itself was grandly and expensively furnished with marbles, *opus sectile*, stucco, a decorated floor and mosaics. The original mosaic programme was extensive. Although mosaics now survive only in the presbytery and apse, there were other mosaics in the narthex (from where silver tesserae survive) and in the domes of the round chapels flanking the apse.[80] There may also have been mosaics in the central dome: there seems no reason why there should not have been, since domes were frequently mosaicked.

The mosaics that survive offer a schema that can be understood both in its parts and as a whole narrative (Fig. 93). In the apse, a beardless Christ, wearing a purple robe, is enthroned on a blue globe, the world itself. He holds a scroll with the seven seals in his left hand, signalling the Second Coming and the Last Judgement, and stretches out his right holding a crown of victory towards S. Vitalis himself, who is ushered in by an angel. Sausage-shaped red and blue clouds hover in a gold background above Christ's head. On Christ's left, another angel brings forward Bishop Ecclesius, who holds a model of this, his church. The upper lunette of the triumphal arch is filled with vines scrolling from baskets and *kantharoi*. Below, two angels support a globe of rayed light; to left and right, cypress trees and then Jerusalem and Bethlehem, below which two palm trees are shown. Much of this evokes images found in mosaics in churches in Rome from the period – the coloured clouds, the sacred cities, the presence of the donor and name saint, Christ seated on the globe of the world. This is unlikely to be fortuitous, given the rivalry between the two sees, but the eschatological theme and the presence of a human donor in the image are trends visible in the fifth century. The patron of the apse mosaic of S. Vitale was not aiming to create dramatic, new imagery but rather used existing subjects to reinforce Ravenna's, and its bishops', standing and prestige.

This local emphasis was achieved most overtly through two panels lower down on the walls of the apse that depict a Byzantine emperor and empress. On the north wall of the apse, Christ's right-hand side, one tableau shows an emperor with his retinue of soldiers, aristocrats and churchmen, one of whom is labelled as Bishop Maximian himself. On the opposite wall, to Christ's left, the other depicts an empress in a heavy purple robe embroidered in gold and with the Magi shown on the hem. She is positioned under an elaborate niche and appears to be about to sweep past a fountain and through a curtained doorway, held open by one of two beardless men in aristocratic dress. To the empress' right stands a retinue of women.

A great deal has been written about these two panels. Because the bishop is identified as Maximian, then the unnamed emperor must be Justinian and the empress his wife, Theodora, who may well have been dead when the mosaic was made. But these are not portrait likenesses of the couple: neither visited Ravenna to pose for pictures, and who knows whether the mosaicists had ever seen them. Rather, an emperor is shown with the three elements that made up his power: senate/aristocrats, army, church; and in her dress and pose, an empress is depicted as supra-human but in her proper place as a woman.[81] Efforts have been made to discover other figures in the mosaic, generally based on finding named individuals of the appropriate age in textual sources; and although people such as Belisarius, his wife Antonina and their daughter Ioannina may have been identifiable in the panels to their contemporaries in the 540s and 550s, the lack of names on the mosaic means that we cannot be certain

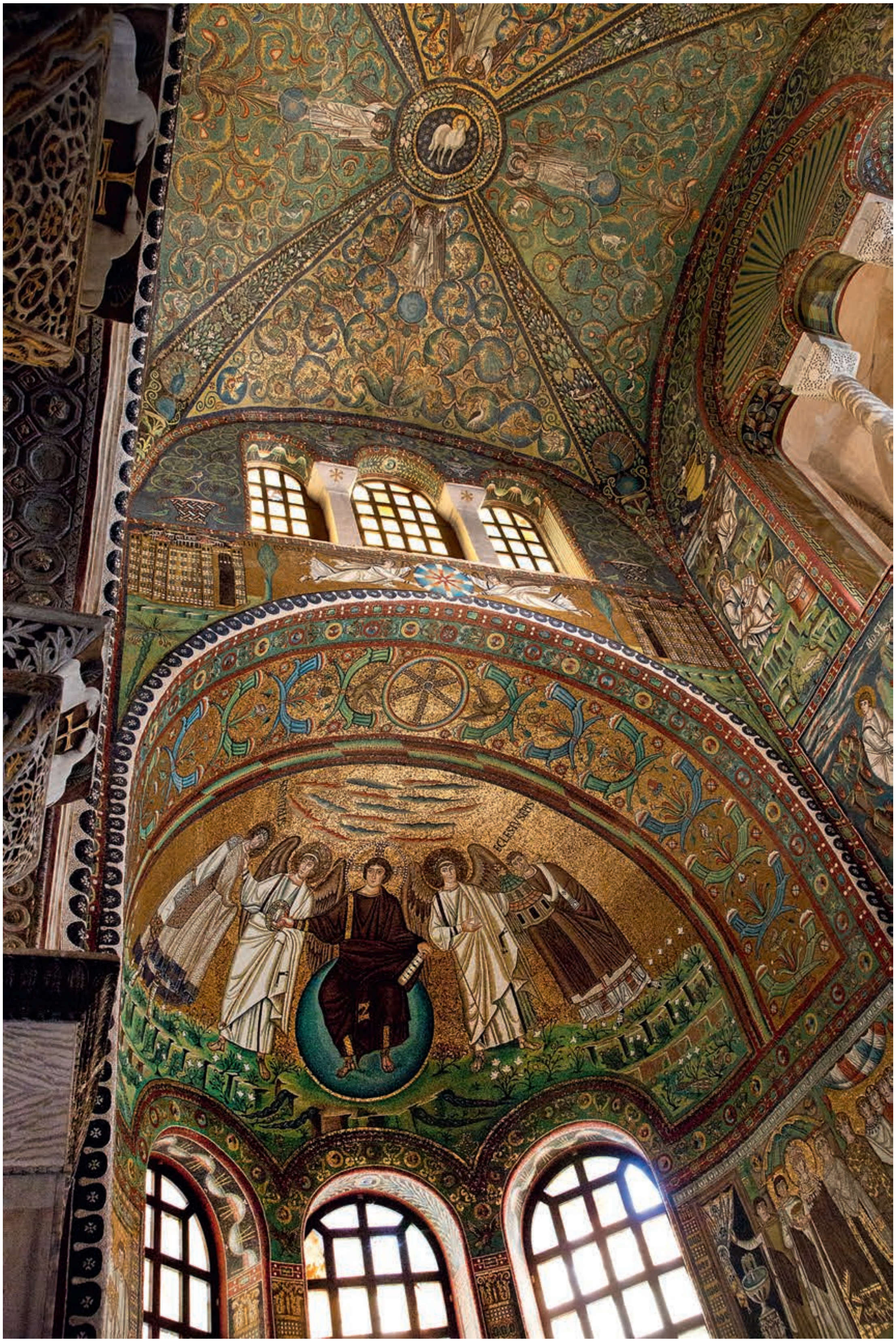


Figure 93 View into the apse and presbytery at S. Vitale, Ravenna, sixth century. In the apse, Christ is flanked by angels, St Vitalis and Bishop Ecclesius with a model of the church; above are the twin cities of Bethlehem and Jerusalem; in the vault, the Lamb of God is supported by angels entwined in acanthus scrolling. To the right of the heavenly cities, Matthew writes his Gospel. The panel depicting the Empress Theodora is just visible in the bottom right of the picture.

they were depicted.[82] Despite the central import of the image as a representation of imperial Byzantine power and authority, there was also clearly a local political dimension to the images, for they make the role of Bishop Maximian as Justinian's 'Byzantiniser' in Ravenna very obvious. The very presence of the emperor and empress on the walls of his church, and of Maximian's place in Justinian's company, served to underline his standing with Byzantium. After the Gothic defeat, Maximian's task seems to have been to defame previous rulers and praise new ones, to rewrite history by erasing both the Goths and their shameful Arianism.[83] But in the Justinian panel, a statement about local and imperial prestige is also visible, as Bishop Maximian juggles for position with the emperor. His feet stand ahead of Justinian's, but his body is overlapped by the emperor's arm.

The political was also religious. The panels underline the piety of the Orthodox emperor by showing him holding a paten, the dish used for communion, and his empress clasping the communion chalice, giving both a place in the liturgical celebrations that would have taken place next to the panels and under the eyes of Christ in the apse. This Eucharistic theme, which is also one of salvation, is maintained by the mosaics of the presbytery wall which depict Old Testament scenes foreshadowing New Testament events, the Old Law replaced by the New. Abraham entertaining angels unaware (an allegory of the Trinity) and Abraham preparing to sacrifice his son Isaac (a foreshadowing of God's offering of his own son, Christ) appear on Justinian's side, flanked by Jeremiah and Moses receiving the Old Law. On the empress' side, the sacrifices of Abel and Melchizedek (again, both images invoking Christ and the Eucharist) are depicted, flanked by Isaiah and Moses with the Burning Bush.[84] Higher on these two walls are the evangelists, John and Luke above Abraham, Matthew and Mark above Abel and Melchisedek, authors of the new covenant, writing it down for dear life, and encouraged by their symbols, which are also the creatures of the apocalypse. On the inner face of the sanctuary arch, roundels of saints rise to meet Christ (in bust form) in the centre. The programme supports a variety of readings: it illustrates the Old Law superseded by the New; it carries liturgical Eucharistic meanings; it displays sixth-century political (the imperial panels, most obviously, but in details such as Moses as a model for the emperor or the bishop) and theological currents (a perceived emphasis on the number three can be interpreted as an Orthodox Trinitarian statement against heretical Arian beliefs). It is a local statement about Maximian rather than an imperial reflection on Justinian. But the overarching theme is one of the righteous making their offerings to God and being welcomed by Christ, an echo of Galla Placidia's S. Giovanni Evangelista and a response to Theoderic's own S. Apollinare Nuovo.

Despite the scale of S. Vitale, however, the largest and grandest of all the new basilicas was Maximian's own S. Apollinare in Ravenna's port of Classe, consecrated in 549.[85] Filled with gorgeous Proconnesian columns, capitals and slabs, imported but carved on site, the building is wonderfully light and airy.[86] Only the mosaic of the apse and its arch now survive, but there was almost certainly mosaic on the nave walls. In the apse (Fig. 94), in the middle of a landscape with flowers, trees, rocks and animals, stands the name saint, Apollinaris, wearing a white tunic with a purple robe over the top, lavishly ornamented with gold spade motifs, his pallium looped around his shoulders, arms raised in an orans pose, the shepherd of his flock, as six sheep (the total of twelve may signify the apostles) approach him on either side. Above him in the blue sky is a huge elaborate jewelled cross with a little bust of Christ (bearded) in the centre; to either side of the cross are figures identified by inscriptions as Moses and Elijah; three sheep (Peter, James and



Figure 94 Apse and triumphal arch, S. Apollinare in Classe, Ravenna, sixth century. The Transfiguration fills the top half of the apse; St Apollinaris stands below the Cross/Christ, flanked by twelve sheep. Below, between the windows, are four bishops of Ravenna; the panel to the left is a seventh-century mosaic showing an emperor presenting a scroll labelled 'Privileges' to the archbishop of Ravenna. On the triumphal arch, where the mosaic may be seventh or even ninth century, twelve sheep emerge from heavenly cities and ascend towards Christ, in bust form, and flanked by the Apocalyptic Beasts/evangelists. The red lines, most visible on the green background of the apse mosaic, indicate areas of restoration.

John, the witnesses to the event) look hopefully up at the apparition. It is the Transfiguration of Christ, the New Testament moment when Christ appeared in his divinity to three select apostles. But it is a very unusual rendition of the scene, very different from that at Sinai. There, the scene echoed the New Testament account. Here it was portrayed as a mixture of the symbolic (Christ as jewelled cross; apostles as sheep) and the irrelevant (the presence of S. Apollinaris) that gives the scene resonances of both the Crucifixion and the Second Coming, as well as celebrating the church's own local name saint.[87] Below the Transfiguration, in the spaces between the windows in the apse, Maximian carefully selected four Ravennate bishops, thus offering an excerpted history of the bishopric back to Apollinaris himself. On the triumphal arch, the mosaics have been restored (perhaps in the seventh or the ninth century, and certainly in the nineteenth) and it is unclear how far what is there now replicates what was there in the sixth century.[88] The imagery now visible, a bearded Christ in the centre approached by twelve sheep emerging through red and blue clouds from the cities of Jerusalem and Bethlehem and escorted by the evangelists' symbols, is not dissimilar to elements from SS. Cosmas and Damian in Rome or from elsewhere in Ravenna. Below this are palm trees (very early twentieth-century

restorations) and images of two archangels (believed to be sixth century). Apollinaris was reputedly the first bishop of Ravenna and Maximian's church was built at the site of his shrine. The bishop-saint is shown in liturgical vestments – the pallium was a part of the accoutrements needed for the celebration of the Mass; furthermore, it was in the gift of the pope and only those permitted by him could wear it.[89] His presence in the centre of the curve, below the Transfigured/Crucified Christ, but looking down on the altar where his successors (especially Maximian) celebrated the Liturgy in his presence, was surely a very powerful statement of the God-given piety of Ravenna and its bishops, four of whom were located below and to either side of Apollinaris.

Both the Byzantine government and the Ravennate episcopate were prepared to add to the considerable number of ecclesiastical buildings in the city. St Stephen, large and splendidly decorated, had a mosaic image of Maximian in its apse; S. Agata had an apse mosaic of an enthroned Christ (with book and beard); there was also much building in Classe, with mosaics in Maximian's S. Euphemia, and in S. Severo, begun by Peter III, completed by John II and dedicated in 582. Agnellus, Maximian's successor, seems to have been the archbishop responsible, some twenty years after the Byzantine capture of Ravenna, for further 'Byzantinising' in the replacement of mosaics in S. Apollinare Nuovo and the rededication of that church to St Martin, a particularly efficacious anti-Arian saint. In his processions of male and female saints, only three are singled out: Martin, the leader of the men, and dedicatee of the church, through his purple cloak; Laurence at number four, in gold (perhaps a reference to Galla's church); and Agnes at number four for the women, who has a lamb at her feet. The women are led by Euphemia of Chalcedon, plausibly a reference to the anti-Arian Council of Chalcedon. But the reasons why these forty-eight specific saints were chosen (all are labelled) is as obscure as the choice of saints at the Rotunda in Thessaloniki. The Magi, added between the Virgin and the saints, may perhaps be constructed as a Trinitarian, and thus anti-Arian, reference, though images of the Magi were generally popular in Christian iconography.[90] How far Agnellus' replacements were political (a removal and damning of Theoderic) and how far religious (anti-Arian and pro-Orthodox) is uncertain, but the seizure and reidentification of the church reflects the political, religious and cultural transformations of Ravenna itself.[91] The heretical barbarian Theoderic's church was 'converted' into a Byzantine and Orthodox space through a series of secular and religious moves, from the legal transfer of ownership to a liturgy of reconsecration, the rededication of the basilica under a new name, and the removal of unsuitable images. This process was a sort of *damnatio memoriae*, left deliberately visible to those who looked hard enough, by which Agnellus and the Byzantine exarch sought to disparage, rather than to eradicate, the memory of their Ostrogoth rivals in Ravenna.[92] But it took them long enough to get around to it.

A DETOUR ACROSS THE ADRIATIC: RAVENNATE MOSAICS IN PULA AND POREČ

Not content with patronising mosaics in Ravenna, Bishop Maximian also employed the medium in the church (now the Church of S. Maria Formosa) he built in Pula, just across the Adriatic from Ravenna. Pula in the Roman province of Istria was an important bishopric in the fifth and sixth centuries; more importantly, Maximian himself was from Pula and had been a deacon in the church there. A fragment of his mosaic, part of a beardless Christ with



Figure 95 Apse and triumphal arch, Eufrasian Basilica, Poreč, sixth century.

a white-bearded man to his right – St Peter perhaps – survives.[93]

Close by at Parentium (Poreč or Parenzo) is the basilica (45 × 20 metres), built by one Eufrasius. It is not certain who this Eufrasius, depicted in the apse mosaic, was but he may well have been the same man as a Eufrasius mentioned as a schismatic bishop in a letter written by Pope Pelagius and dated to 559. As a consequence of the possible identity of the patron, and because of the remarkable similarities between the mosaics here and those at S. Vitale, both the church and its mosaics have been dated to the mid-sixth century.[94] The church was clearly a rich one, with fixtures and fittings in marble, *opus sectile* and stucco-work, and forming part of a larger ecclesiastical complex which included, as with churches in both Rome and Ravenna, a baptistery and an episcopal palace. Mosaics survive in the main apse, triumphal arch and two apses in side chapels to the north and south of the central apse (Fig. 95).[95] Both

east and west façades also contained mosaic, the first surviving evidence of it on a façade, although façade mosaics are known to have existed at St Peter's. There were also mosaics in the sixth-century episcopal palace complex.[96]

The apse mosaic shows Eufrasius in the presence of the enthroned Mother of God and her Christ-Child. To Mary's right, angels usher in St Maurus, bringing Eufrasius holding his church, Archdeacon Claudius with a book, and a small boy, also named Eufrasius and seemingly Claudius' son, holding candles. On her left, three unnamed saints are led forward. Above all of their heads, red and blue clouds fill the gold background. Below are a long inscription naming Eufrasius as the patron, panels of ornament, and scenes of the Annunciation and the Visitation to Elizabeth, mother of John the Baptist. There are roundels of twelve female saints in the intrados of the arch, flanking a Lamb in the centre, reminiscent of S. Vitale. On the face of the arch itself, Christ is shown in the centre seated on a blue globe (something similar is seen at S. Lorenzo in Rome, as well as at S. Vitale) flanked by the twelve apostles. The piers between the windows depict Zacharias, an angel and John the Baptist. The side apses show symmetrical but not identical images of a half-length Christ in a cloudy sky, blue and pink of course, crowning two saints in each.

This mosaic programme, like every other, can be read in a variety of ways, personal, doctrinal and political. The mosaic has a private meaning in the context of the individual prayers of the suppliants. The three saints at the viewer's right of the apse are unidentified perhaps because – as with the woman in Hosios David – it was enough for the patron, for Eufrasius, Deacon Claudius and even the boy to know who they were.[97] The scene suggests that Eufrasius, and also Claudius and his son, should be seen as pious and blessed for they are escorted by saints and angels into the presence of Christ and his mother. Doctrinally, if the Eufrasius of the church and mosaic was the bishop in dispute with Rome, then the programme may also be a theological statement of Chalcedonian Orthodoxy on Eufrasius' part, a Trinitarian theological argument rather than one about the nature(s) of Christ. That particular Bishop Eufrasius, like his successor, John, supported Chalcedonian Orthodoxy against Justinian and the Fifth Ecumenical Council held at Constantinople in 553, a Council that was seen by many western bishops as an attack on the orthodoxy of the 451 Council of Chalcedon and its decrees, most especially its definition of the Trinity. This dispute brought the bishops into conflict with the pope, who sided with the emperor, an argument that lasted into the 580s.[98] Possible Trinitarian elements of the iconography of the programme include details such as the triple-banded orb held by the central angel between the windows of the main apse.[99] By showing Christ as a child held by his human mother, his Incarnation and human and divine natures are emphasised.[100] The figure of Susanna shown on the casket held by Zacharias may suggest the presence of the wrongfully accused – just as the schismatic bishop perceived himself; St Euphemia (shown next to the Lamb of God at the crown of the apse arch – the intrados – was also a saint favoured by the Chalcedonian Orthodox, as was true in S. Apollinare Nuovo. Politically, therefore, if this was Bishop Eufrasius' mosaic, then it might be seen as setting him at odds with both the Eastern Empire and the pope whilst at the same time asserting his piety and hence his ecclesiastical authority. In conflict with both East and West, Eufrasius may well have wished to show that his place as bishop came from God.

In their appearance, the mosaics of the Eufrasian basilica share similarities with some mosaics in Rome, notably S. Lorenzo *fuori le mura*. But they are unmistakably closer still to S. Vitale, even to the extent of possibly sharing

the same mosaicists, who may also have worked at Pula. Certainly the two churches share the same masons' marks.[101] The mosaics may well be the product of the same workshop or of artists trained similarly: the presumed temporal overlap between the two allows for speculation about mosaicists shuttling backwards and forwards across the Adriatic and perhaps even sharing materials between the two sites. Though this is an intriguing picture, the connection could only have been practical, on the level of the workmen. How Archbishop Maxentius, that friend of Byzantium, might have felt about the heretic and schismatic Eufrasius in Parentium and his claims to ecclesiastical authority is another matter.

Generally, the sixth century seems to have been a bad time in Italy. The protracted Justinianic wars, the outbreaks of plague and the Lombard invasions must all have taken their toll. But just how debilitating these were is unclear. Regardless of what was happening elsewhere in Italy, the quantity of mosaic in Ravenna and its steady use throughout the sixth century suggests that life in Ravenna was not as hard as elsewhere, that there were resources to spare beyond the protection of the city – for Classe and Pula for example – and that the presence of the Byzantine administration allowed, indeed demanded that the city thrive and grow. Whilst Ravenna survived as the Byzantines' capital in Italy and their administrative centre until the eighth century, new public buildings continued to be built. The bishops of Ravenna also flourished, seizing their chances to assert dominance locally and to contest their standing with Rome. Six major churches were constructed between 540 and 600, together with a number of smaller ones; materials, notably marbles, were imported from Constantinople for these; mosaic, including gold mosaic, continued in use. It was not accidental that mosaic was commissioned in Ravenna: it was deliberate appropriation of a medium employed by popes and emperors alike. Similar elements such as octagonal baptisteries, large churches, lavish gifts and martyrs' remains also needed to be adopted in Ravenna. The bishops and archbishops of Ravenna were not provincial upstarts but genuine power players in the sixth century. Their churches and the fixtures and fittings within them reminded those around them of their ecclesiastical status, perhaps enabled them to challenge the riches of churches in Rome and sought to keep God on their side. And it was not only bishops who had the resources needed for building work; local rich men, notably Julianus Argentarius, were prosperous enough to spend their resources in this way. If the ability to build on a large scale and luxuriously is a sign of wealth and prosperity, then the construction of mosaics in Ravenna implies a degree of security and affluence.

ROME: TROUBLE AND STRIFE IN ITALY

And so to Rome, Ravenna's rival. While Ravenna was on a high, politically and economically in the sixth century, first as Theoderic's capital, then as capital of the Byzantine exarchate and seat of the assertive archbishops of the city, Rome's history was more traumatic. In contrast to Ravenna, fifth-century Rome had endured two sacks, the last emperor, Romulus Augustulus, had been deposed in 476, and by 489 Theoderic had established himself as the most powerful king in Italy – in Ravenna rather than Rome. Nevertheless, Rome remained wealthy, prestigious and populous, still a rival to be matched. As Theoderic's motivation in commissioning mosaic almost certainly came from his assessment of the status of the medium and his emulation of its use in Rome as well as Constantinople, it is worth considering how Theoderic's Roman contemporaries employed the medium in the context of its prestigious heritage in their city.

Although Theoderic tended to steer clear of Rome (only one visit, in 500, is known), it remained politically important to him and he gave attention to rebuilding the city. There was already at least one Arian church there, that of S. Agata dei Goti, built by Ricimer, and Theoderic may have added to the number.[102] But the absence from the city of its secular ruler opened a space for local inhabitants, including potentially the senatorial aristocracy and the bishop of Rome, to assert themselves. As the senatorial aristocracy faded or moved away throughout the sixth century (the last mention of the Senate as a functioning body comes in 580), the popes, who were themselves often from this same aristocratic background, gradually emerged as those best placed and best able to rule, a story unfolding throughout the Middle Ages.[103] In the sixth century, the popes were often in dispute amongst themselves (Laurence and Simplicius, elected at the same time in 498), and in conflict with the Byzantine emperor (Hormisdas with Anastasios, John with Justin I, Agapitus and Vigilius with Justinian and Theodora).

What is known of sixth-century mosaics in Rome is all ecclesiastical. It is clear that popes and churchmen continued to be powerful and wealthy despite all the vicissitudes, that they were prepared to see the investment on church buildings, decorations and mosaics as worth making, and that consequently mosaic carried some value above and beyond its costs. The *Liber Pontificalis* makes it apparent that almost every pope in the sixth century founded or rebuilt churches, though it does not always mention the fixtures and fittings of those churches. Six large mosaics in important churches are known from this period, though only two survive. Much of this work took place in the early years of the century, with Pope Symmachus in particular continuing in the traditions of his predecessors, building or rebuilding at least twelve churches in the *Liber Pontificalis*' account. He is known to have installed mosaics into the fountain he built in St Peter's and he decorated St Peter's itself lavishly with costly marble, though the *Liber Pontificalis* does not say whether there were mosaics in any of his other building projects.[104] Nor does it record any building work on the part of Symmachus' successor, Hormisdas, though it does detail considerable gifts of gold and silver to St Peter's, provided by the pope, by the Byzantine emperor Justin I, by Theoderic and by the Frankish king Clovis. John I (523–6) was more of a builder and, among other works, installed mosaics and *opus sectile* in the great circular church of S. Stefano Rotundo, one of the largest and most magnificent of all Roman churches.[105] What survives there hints at what must have been lost. Pope Felix IV too (526–30) took on at least two building projects, and one of these provides the first surviving mosaic of sixth-century Rome, that of the church of SS. Cosmas and Damian.

Felix, with the permission of the secular powers – either Theoderic or his daughter, Amalasuntha – chose to erect the first church in the monumental centre of Rome, the Forum. He had the so-called Temple of Romulus, a small, round early fourth-century building leading into the Temple of Peace, converted into a church dedicated to the holy healers and martyrs, SS. Cosmas and Damian.[106] It was a deliberate decision. The church occupies a large audience hall which had formed part of Vespasian's Temple of Peace, paid for by the plunder from the Jewish War of AD 70–1: it was said that the treasures from the plundering of the Temple in Jerusalem had been stored here.[107] This was also the area where doctors in the public service had had their station and where, in the second century, the physician and philosopher Galen had delivered lectures.[108] Although the presence of a Christian church in the Forum was a sign of just how far Christianity had come since Constantine built churches on the edges of the city, it had taken a good two hundred years to get there and the



Figure 96 View of the apse mosaic, SS. Cosmas and Damian, Rome, sixth century. Christ appears amid red and blue clouds with Sts Paul and Cosmas and Pope Felix (restored) to the left, and Sts Peter, Damian and Theodore to the right. The raising of the floor has brought the mosaic much closer to the congregation than it was originally. The remodelling of the church has also meant that parts of the mosaic of the triumphal arch have been lost – an evangelist from each side and all but some stray hands and arms of the elect holding up crowns.

Forum had lost much of its importance – by the sixth century, it was an increasingly deserted space. Nevertheless, it was an important gesture. Felix died before the church was completed, that task falling to his successor, John II (533–5), whose monogram is on two basket capitals in the church, and who may have also sponsored the mosaic.

Felix's sixth-century church was remodelled in the seventeenth century: the existence of disembodied hands offering wreaths of victory on the triumphal arch give some indication of the changes made, as does the current apse arch, which together with the hefty baldacchino cuts off the view of the mosaic. At the same time, also affecting the viewing of the mosaic, the floor level was raised by 7 metres, bringing the mosaic disconcertingly close to the eyeline.

Despite this, the scene in the apse is an impressive one (Fig. 96). A large and imposing Christ, in golden tunic and pallium, is shown on a deep blue background appearing (or descending) amidst a carpet of red and blue clouds (such clouds are also visible in the apse mosaics of S. Costanza), above a watery landscape. A standing group of figures salute his coming. To Christ's right, St Paul brings forward one of the patron saints, whilst Bishop Felix, holding a model of the church, indicating his role as patron, lurks modestly in the background (this section has been largely restored: Felix was replaced by Gregory XIII with an image of Pope

Gregory, which was in turn replaced in the sixteenth century; three bees, emblem of the Barberini family, hover above the flowers immediately to Felix's left). On Christ's left, St Peter ushers in the other patron saint, whilst St Theodore loiters behind them, dressed in civic costume with an astonishingly ornate cloak and fashionable long white stockings, and holding his crown of martyrdom.[109] Both patron saints, the holy doctors Cosmas and Damian, hold their own crowns of martyrdom, whilst round the neck of the (viewer's) right-hand saint is a leather bag holding his tools of the trade. A phoenix, symbol of the resurrection, sits in a palm tree behind the pope, and the River Jordan runs along the bottom. The apex of the apse has also been restored. At the bottom of the whole scene (Fig. 97), twelve clearly male sheep – the apostles – approach a coy and sexless Lamb of God perched on a rock from which emerge the four rivers of paradise.

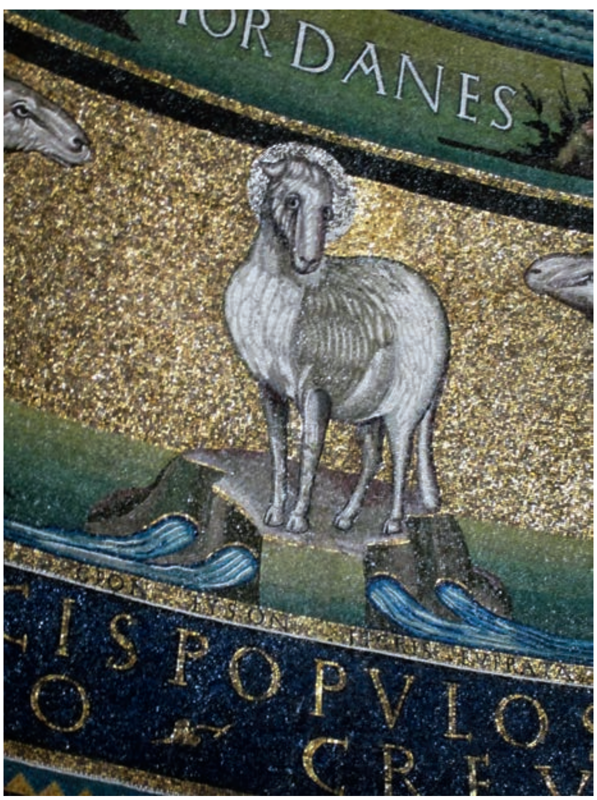


Figure 97 The Lamb of God, haloed in silver and atop a rock from which flow the four rivers of paradise. Detail from the apse mosaic, SS. Cosmas and Damian, Rome, sixth century, obscured by the tabernacle in Fig. 96.

On the triumphal arch, the imagery is apocalyptic. A lamb (symbolising Christ) sits on a throne flanked by seven candlesticks (three and four), four angels (two and two), and then the four evangelist symbols, which double as Beasts of the Apocalypse, two on each side. Below them, the Elders and prophets and the elect were originally shown holding up their crowns: some wreaths and arms, looking very odd, are all that survive. The background is gold, but the upper register (the Lamb and his escort) is separated from the lower (the cheering elect) by yet more red and blue clouds. These mosaics may be sixth century, but they have also been dated to the seventh or even eighth century; if so, they may well have replaced sixth-century work.[110]

The iconography of apse and arch shows Christ appearing in his glory; it may have brought the Second Coming to mind. Elements certainly suggest theophanic imagery visible in other mosaics of the period, both in Rome and elsewhere. The candlesticks and the elect have already been noted at S. Maria Maggiore and at S. Paolo *fuori le mura*, the Lamb and the sheep (plausibly) at S. Sabina and at S. Apollinare in Classe. The red and blue clouds are visible at S. Pudenziana and in Ravenna. There are also echoes of the Transfiguration seen in other sixth-century mosaics, such as St Catherine's and Classe again. Peter and Paul were a popular Roman motif and the presence of the name saint together with that of the human donor became increasingly popular, used slightly later in the century at S. Vitale and the Eufrasian Basilica of Poreč, for example. Although Felix's image (if it was there in the sixth century) is the earliest surviving mosaic example of the patron present in both the scene and the presence of the divinity, it reflects the translation of an already existing motif across media and into a very public

space. Images of the patron in the mosaic, never mind other media, had already been used in Constantine's St Peter's and in S. Giovanni Evangelista in Ravenna. Nothing at SS. Cosmas and Damian is unexpected in its theme, though there are variations in the representations – the red, blue and pink clouds, for example, are used in a different way from that of S. Pudenziana. The mosaic of SS. Cosmas and Damian (if it was indeed the *fons et origio* rather than one of several) was to prove a very popular model for later mosaics in Rome. Details, from the phoenix to the carpet-clouds, not to mention the sheep and the candlesticks, are repeated or evoked time and again in Roman mosaics across the centuries: at S. Prassede, S. Cecilia, S. Marco, and even in paint at S. Maria in Pallara.[111]

Where Ravenna continued to be relatively unscathed by the wars of the sixth century, Rome was more affected, besieged and fought over in the Gothic Wars of the 530s to 550s. But what happened in Rome was, as always, not typical of what was happening in the rest of Italy. The size of the city, the size of the territorial holdings that it managed to hang on to, the place of its bishops, or popes, as major players in the religious field and never removed from politics, as well as its prestige, which was still a factor East and West, helped it to continue to survive and indeed to be influential and powerful. Nonetheless, during the Gothic Wars, little if any building work is recorded in Rome. The *Liber Pontificalis* suggests that not only were popes dealing with the fighting around them, they were also in on-off conflict with various Byzantine emperors; Popes Agapitus, Silverius and Vigilius all found themselves in trouble and exile. During the papacy of Pelagius (556–61), building activity and donations of precious materials to churches are recorded as starting up again, but not on the same scale as before. The Gothic Wars followed by the Lombard invasions of the last thirty years of the century, coupled with floods and famines, may well have made a difference to the papal ability to organise building work or sponsor lavish gifts. On the strength of what is recorded of their building programmes, the Roman Church had less to spare for building than the bishops and archbishops of Ravenna.

The only other surviving sixth-century mosaic in Rome, the triumphal arch of S. Lorenzo *fuori le mura*, postdates the Gothic Wars. S. Lorenzo was another of the original major Constantinian basilicas of Rome located outside the city walls. It was substantially remodelled in the late sixth century by Pope Pelagius II (579–90), and again in the twelfth century when the apse mosaic was destroyed.[112] What survives is the mosaic that was formerly either on the original apse arch or on the triumphal arch, and it now faces east, not west, towards the apse and altar at the crossing of the church. This mosaic is both similar to and different from SS. Cosmas and Damian (Fig. 98). At S. Lorenzo, at the crown of the arch, rather than a Lamb on a throne, a purple-clad Christ is enthroned on a globe symbolising the cosmos. Peter and Paul flank him: Peter, unusually, to Christ's right. Beyond Peter, St Laurence, the patron saint of the church, brings forward Pelagius, the patron of the church, holding a model of his church. On the other side of Paul are St Stephen the first martyr and St Hippolytus, holding a martyr's wreath. Below, in the spandrels, are the heavenly cities of Jerusalem (below Peter and Laurence) and Bethlehem (below Paul).[113]

The two churches, SS. Cosmas and Damian and S. Lorenzo, were built perhaps forty years apart. In both, however, Christ is shown majestically appearing to his chosen saints, the titular saints of the church and the apostles of Rome, whilst the patron of the church itself, though visibly in the presence of Christ, stands modestly aside. With this iconography on the arch at S. Lorenzo, we can only wonder about what may have been in the apse: Mary and her Child



Figure 98 Mosaics in S. Lorenzo *fuori le mura*, Rome, sixth century, originally on the triumphal arch and looking out into the church; remodelling of the building now causes the mosaic to face the altar.

perhaps? The Transfiguration? Both churches display a lavish patronage. SS. Cosmas and Damian preserved and increased the original precious marbles of the original temple; S. Lorenzo incorporated a great deal of high-quality *spolia* in the form of columns, capitals and entablature, as well as new capitals whose marble indicates that they were deliberately brought from Constantinople. But both were built at anxious moments for the inhabitants of Rome, though in both cases it may be that our sense of tumult and chaos is heightened because we know what was about to happen. SS. Cosmas and Damian, dating to the 520s–30s, was built round about the time of the death of the powerful Ostrogothic king, Theoderic, and the troubled and relatively brief reign of his daughter, Queen Amalasuntha, and just before the period of the Gothic Wars. According to Pelagius' own inscription in S. Lorenzo, that church too was built at a time of dearth and tumult in the 570s. But dearth or not, there were still enough resources in Rome to build on a grand scale and to hire craftsmen and obtain raw materials. As popes took on the roles of protectors and providers for the city, beginning to wield the authority previously held by the

emperor's officials and the senatorial nobility, church building was a way of keeping sections of the population in work, and so fed. Such churches, and their images, allowed popes to advertise their piety, as well as their godliness, invoking divine assistance, affirming a triumphant Christianity, and asserting the position and power of the bishop of Rome, closer to God than any bishop of Ravenna.

The artistic relationships between the Ravenna mosaics and those in Rome are not clear and it is not possible to tell whether the same artists worked in both cities. In terms of the actual imagery, while there are iconographic differences (the Transfiguration at S. Apollinare in Classe is unique, for example), the similarities are more extensive. Such shared motifs include large-scale elements, such as the presence of the (sometimes living) donor with his church, and his presentation to Christ (Cosmas and Damian, Vitale), the presence of the heavenly cities (Cosmas and Damian, Vitale, Apollinare in Classe, and even Apollinare Nuovo), the presence of the name saint(s) of the church, the use of sheep to represent the apostles and Christ himself. The images of Justinian and Theodora in S. Vitale echo images of Galla Placidia, and indeed images of other emperors in Rome. Details are shared: blue and pink clouds are a popular and enduring motif in both locales, for example. But many of these elements are subjects visible in fourth- and fifth-century Christian art. Thematically, in both Rome and Ravenna in the sixth century, as earlier in Rome and Thessaloniki, mosaic images carry apocalyptic and theophanic undertones: the Second Coming, Christ in Judgement, the New Jerusalem, the Eucharistic Sacrifice of Christ. Even S. Apollinare in Classe with its unique Transfiguration is no different here. Many of these themes and iconographic elements are not restricted to monumental mosaics but are present in Christian art of both Eastern and Western empires alike, in both large- and small-scale media. Mosaic iconography may differ in its details but not in its overarching themes from other branches of Christian art in the period, and those differences often reflect the function of mosaic art as very large images often located in the most significant areas of the church. As with the fifth century, so with the sixth, iconography may vary, but the themes remain similar. The point is not that one copied from the other, but that these are the sorts of images that made sense to people at the time, the sorts of images they expected and wanted. S. Lorenzo did not 'copy' S. Vitale: both used the image of Christ on the globe because it was a key Christian image that spoke to its audiences about Christ, his divinity, his majesty and even his Second Coming as judge of the living and dead. Some of this emphasis may have something to do with the uncertainties of the time, the changes in the old world order, the wars, famines, plagues and earthquakes, which suggested the possibility of the end of the world five hundred years after the birth of Christ (there was a similar fear as the year 1000 approached).[114]

Of the fourteen popes whose careers span the sixth century, the *Liber Pontificalis* records only six as building or rebuilding churches, and mentions mosaics only in the case of one, not Felix but Symmachus (498–514), the patron most responsible for building in this period in the eyes of the *Liber*. Other sources reveal that the basilica of the apostles Philip and James, completed by John III (561–74), contained some sort of mosaic work.[115] Gregory I, Gregory the Great (590–604), reconsecrated Ricimer's church of S. Agata dei Goti and may have altered its mosaics. Whilst the *Liber Pontificalis* is not a complete account of everything that the popes ever did, this lack of patronage is suggestive. In sixth-century Rome, times may have been harder and Byzantine money in shorter supply than in Ravenna. In that city, times were about to get harder, and it is no accident that after the sixth

century the city more or less vanishes from any discussion of mosaics. The Byzantines' war in Italy dragged on until 554, seeing off the Gothic kingdom, but not the subsequent onslaughts of the Franks and Lombards. By the late sixth century, the Lombards had reduced Byzantine holdings in Italy to bits and pieces, including Naples and its hinterland, Calabria, Sicily, parts of the coast north of Genoa, Ravenna and its territories, Rome and a strip of land between Rome and Ravenna. By the seventh century this was all gone, and by 751 Ravenna was no longer Byzantine.

CONCLUSIONS

Many mosaics actually survive on the wall from the sixth century – we shall not see this many separate examples again until the eleventh century – but they present more questions than they answer. It is not possible to make a coherent narrative of mosaic history in the sixth century through the survivals that remain to us: there is still too much lost to be able to trace convincing patterns of development across what still exists. Although S. Vitale looks enough like Poreč and Pula for a convincing case to be made about shared artists, this is perhaps the only place where the visual elements are similar enough to allow this conclusion to be drawn. What survives in Rome, Constantinople, Sinai and Cyprus is both different enough and similar enough to allow parallels to be made and dismissed with almost equal ease.

In this picture of mosaic-making across East and West in the fifth century, if all mosaicists came from Constantinople, as scholarship has asserted, then they were certainly very busy and very well travelled. Whilst Constantinople probably did have its own mosaic workshops, there seems no good reason not to posit the existence of workshops in Rome (surviving from the imperial period), Ravenna (perhaps established from Constantinople, but equally, perhaps present from the imperial period and from Milan or even Rome) in the same way that they seem to have existed in the East, perhaps at Antioch, Alexandria and Thessaloniki. Further, there is no need to seek for superior or inferior workshops: too little is known to be able to make any such critical judgement as yet. The spread of mosaic, however, implies that access to the materials and makers of mosaic was relatively straightforward even in more remote areas of the Eastern Empire and its environs (Georgia, for example): trade in Levantine glass and in tesserae must have carried on amid wars and conflict and plagues.

As for patrons, these seem a similar mix to those of the fifth century. The very wealthy and powerful – members of the imperial families, popes, bishops, aristocrats – were responsible for almost all that survives on the walls in Italy, Constantinople and Sinai, and for other mosaics whose existence is known from excavations and through written sources. In some of these cases, it is possible to speculate about motives for patronage – Theoderic in Ravenna for example, Popes Felix and Pelagius in Rome, Justinian in Constantinople and Justiniana Prima. It is possible to suggest a scenario in which mosaics form a part of the playing out of pious power games within cities (the pope versus the bishop of Ravenna; the Byzantine emperor versus the pope). But many surviving sixth-century mosaics come from places that, if they did not retain their mosaics, would be unremarkable – the Cypriot sites, for example, and the mass of smaller churches in the Levant and Greece where anonymous patrons (matching the woman of Hosios David in Thessaloniki), perhaps even groups, sponsored mosaics on a smaller scale, but by no means less spectacularly.

What is clear is that mosaic continued to be a favoured (though not the only) form of wall and vault decoration for emperors, kings, popes and

bishops across the Mediterranean world from Mar Gabriel to Ravenna. Consequently, it carried a value relating to prestige and almost certainly to cost and the display of wealth as well. It was not solely a preserve of emperors and popes, but was also employed by aristocrats, though we cannot tell whether there were any social checks, as well as financial ones, on its use. I would guess not. As the world changed, it seems to have been valued by Byzantines and 'barbarians', emperors and kings, popes and bishops alike. In both East and West, this was perhaps in relation to its nature as a Roman medium, for its use evoked *romanitas* and associations with the Roman Empire. It seems likely that Theoderic used mosaic to make his Ravenna into a 'proper' Roman capital city and to underline his own credentials, as emperors had before him. It also seems probable that part of the struggle for supremacy, political and religious, between Rome and Ravenna was mediated through grand ecclesiastical building programmes and through art, including the use of mosaic. The mosaics of this century show that mosaic was increasingly a religious medium, a statement of Christian heritage as well as a medium in which to display piety and to signal and demonstrate theological beliefs and positions. However, mosaic continued to appear in secular contexts, significantly in baths, its traditional location, but also in palaces and (plausibly) in luxury residences. What is remarkable is its continuing use on this scale in a century, East and West, that was one of warfare, plague and natural disasters, of power struggles in Rome and unrest in Byzantium. Somehow, mosaic seems to have maintained a position as a binder that held together the Mediterranean world, a reminder of the Roman world from where both Western 'Europe' and the Byzantine Empire had their roots.

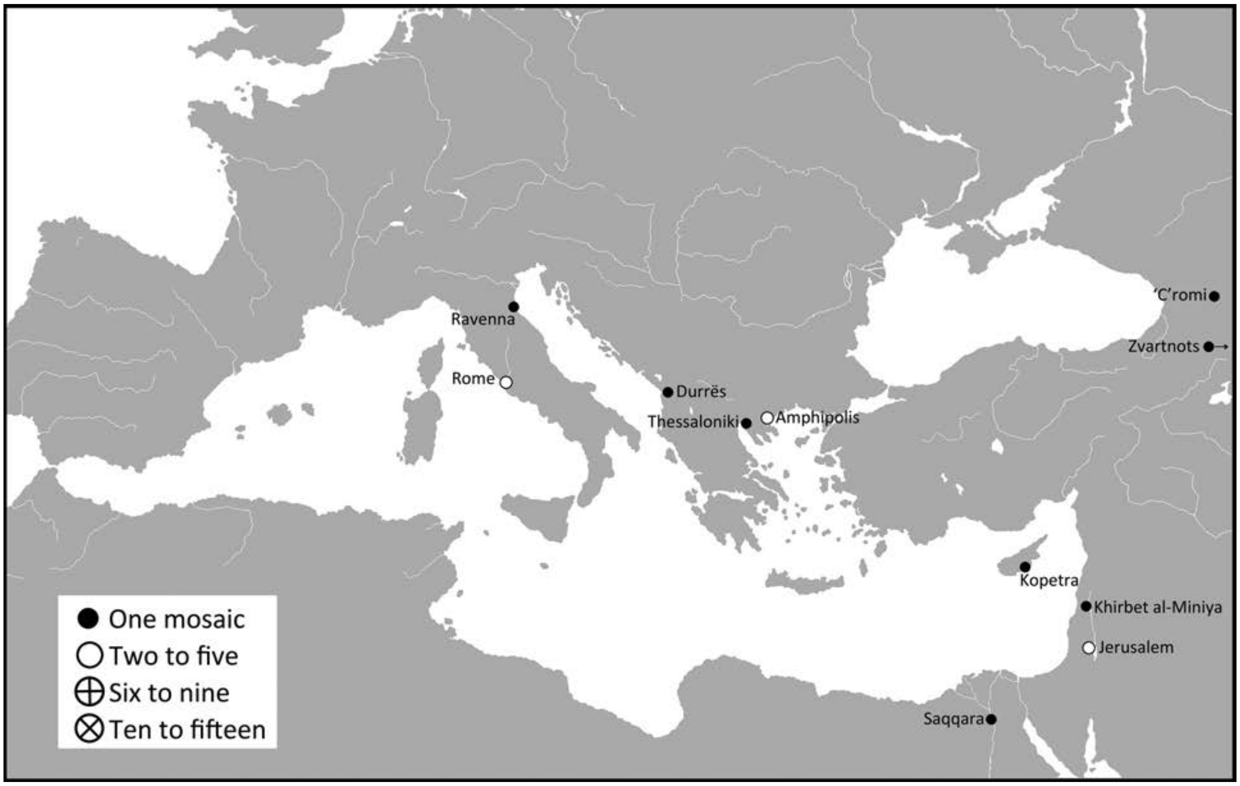
Chapter 8

NEW BEGINNINGS? ISLAM, BYZANTIUM AND ROME: THE SEVENTH AND EIGHTH CENTURIES

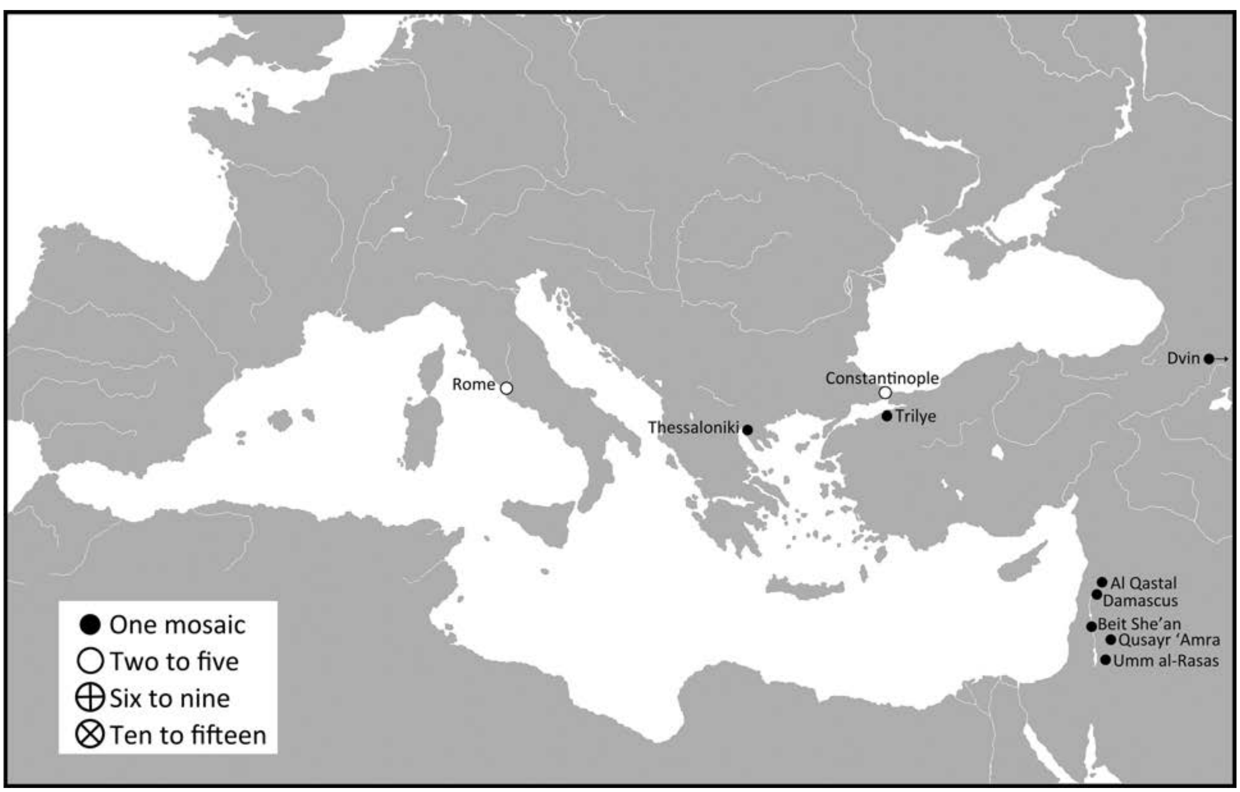
If the fifth and sixth centuries appear to have been high points in mosaic-manufacture (Maps 2 and 3), then the seventh and eighth were not. Maps 4 and 5, plotting the quantity and distribution of mosaic work in the seventh and eighth centuries, indicate a considerable decrease in the amount of mosaic surviving, a drop so substantial that it surely reflects a reality that not as many mosaics were made at this time.

In contrast to the figures of seventy-seven and sixty-three new mosaics for the fifth and sixth centuries, for the seventh century there are seventeen new mosaics mapped, and for the eighth century thirteen. These survivals are fragmentary: very few remain on the wall. However, the distribution of the mosaics remains focused in much the same regions: Italy, especially Rome; in and around Thessaloniki; in Constantinople; and in the Levant; though there are fewer examples of the limited mosaics from smaller sites than earlier. This reduction is also apparent in the references to mosaics made in written texts.[1] The most significant change, however, between the fifth and sixth centuries and the seventh, is that a new mosaic in Jerusalem was not the commission of a Christian emperor or patriarch. Instead, it is the first surviving example of Islamic mosaic, present (on a vast scale) in the building known as the Dome of the Rock. It was to be followed in the eighth century by the mosaics of the Great Mosque of Damascus.[2]

In terms of the patronage of mosaics, it is the case that 'more of the same' will be apparent in the ways and rationales for which mosaic appears to have been used: individuals, notably emperors and popes, though not exclusively so, sponsoring churches and mosaics for specific reasons. But the dramatic fall-off in actual mosaics needs some explanation. It implies a variety of issues: supply problems; decreased distribution of wealth; more uncertainty; perhaps



Map 4 New wall mosaics in the seventh century.



Map 5 New wall mosaics in the eighth century.

a feeding-through from the problems of the conflicts and changes of the late sixth and seventh centuries; and new political concerns. These include the arrival and spread of the Muslim Arabs into the Mediterranean, and the loss of northern Italy from the imperial (both old Roman and new Byzantine) sphere of influences, first with the Lombards and then with the Franks. It is, however, with the Arabs that I will begin, for the rise of Islam was the biggest shift of regional history in the period.

THE ARABS AND ISLAM

The Eastern Roman Empire had been embroiled, on and off, in warfare with the Persians throughout its history. Justinian's conquests of the early sixth century in the East were all lost by the end of that century, and the late sixth and early seventh centuries saw catastrophic Byzantine defeats. At first, Palestine was one of the few areas of the empire not suffering from invasions or war, and churches continued to be sponsored and built there: Pope Gregory I (540–604) was one who sent money to Jerusalem, and there was building work at Madaba and on Mount Nebo. Although the Sasanian occupation of the region between 614 and 628, coupled with the capture of Jerusalem and a major earthquake in 633, affected both peace and prosperity in the region, the most disruptive influence on both the old Roman Empire and the new Byzantine Empire was not the Persians but Islam, spread as both a religion and a political force by Arabs moving outwards from the Arab peninsula (modern Saudi Arabia, Yemen and Gulf States) and into North Africa and the Levant.[3]

The Prophet Muhammad had united the Arab tribes, and after his death in 632, his successors, the three 'orthodox' caliphs, broadened the range of the new faith. Gradually throughout the seventh century the Arabs became the dominant power in the Mediterranean, both east and west. Byzantine territories in the Levant and Egypt were conquered between 636 and 642; North Africa and Visigothic Spain were Arab possessions by 711; in the ninth century, after ravaging Italy, the Arabs ('Saracens', as the Romans called them) would sack Rome. Throughout the seventh century, as the Umayyad caliphate (661–750) brought a temporary end to the incessant and on-going civil wars of the Muslim community, so it continued to expand outwards into Anatolia, besieging Constantinople itself unsuccessfully on three occasions, 669, 674–80 and 717–18. Island after island in the Aegean was captured and colonised, together with the Lycian coast, Cyprus, Rhodes and Crete. The major Roman and Byzantine city of Damascus, which had been held by the Persians from 612 to 628, was captured in turn by the Arabs in 635 and served as the capital of the Umayyad caliphate between 661 and 750. For the Arabs, Byzantium was the most significant other power with whom they came into contact, and was the most influential in the establishment of their own state, for which Byzantine administrative and economic systems, even the weights and measures, were borrowed and adapted.[4]

There is considerable debate about how destructive the Islamic conquest was and what its effect on the cities and urban, Roman lifestyle of the Levant may have been. It was believed that the Arabs destroyed the way of life of Christians in the Levant, and that the invasions accelerated a decline in urban life that had begun in the sixth century, with cities shrinking and being abandoned.[5] In fact, conversely, archaeological material in particular indicates that in the Early Islamic period, the seventh century, the population of Palestine at least continued to be relatively prosperous and peaceful and that, at the start of the seventh century, Christian communities were thriving in the region.[6] Christians do not seem to have been persecuted, the ecclesiastical hierarchy

remained almost intact and Christian pilgrims could still gain access to the holy sites of Christ's life. There were a large number of churches in use in the Umayyad period, some of which were built from new, others that were rebuilt and repaired. However this was significantly reduced – perhaps by half – by the early ninth century under the Abbasid caliphate.[7] Several factors – earthquakes, plague and deliberate destruction – seem to have been at play here, though in many cases the churches seem simply to have been abandoned, something which relates to population shifts as well as to economic factors. These last may have had much to do with the relocation by the Abbasids of the capital further east, from Damascus to Baghdad in the 760s. Overall, it seems plausible that the Arab conquests were initially probably more damaging to the Byzantine Empire than to the Christian Levant since, with the capture of Arabia, Egypt, Syria and Palestine, Byzantium lost some of its wealthiest territories.

This is all relevant in a study of mosaics because mosaic became an art form practised by several Islamic Arab dynasties. The Arabs themselves were originally desert nomads with no monumental art and little interest in it. As they came into contact with the more urban lifestyles of the territories of the former Roman Empire, this began to change, particularly in the development of the mosque as a place of worship. In a way perhaps similar to that in which Christians had developed their art from the pagan monuments and Roman buildings around them, so too the seventh-century Muslim conquerors appropriated, modified and changed Christian art and buildings to suit their needs and requirements. Seventh-century Umayyad architecture and art was influenced by what it came into contact with, and that, most specifically, was Byzantine art in the Levant and Sasanid art to the east. Before Islam, Christianity (at least according to Christian sources) had a considerable hold on the Arab peninsular and Muslim Arabs may well also have come across Christian mosaics in Arabia.[8] As mentioned earlier, there were mosaics in the sixth-century Christian churches at Najran and at Sana'a in southern Arabia, possibly the work of Syrian Christians.[9] When the Muslim Arabs themselves turned to creating buildings for their worship, the use of Christian elements including mosaic was hardly a surprise. This was what they knew and could see around them marking out the importance of Christian churches. In 684–5, 'Abd Allah bin al-Zubayr decorated the enlarged mosque in Mecca with tesserae and marble columns brought from Sana'a, thereby adorning and beautifying the mosque, and also evoking for its viewers the most famous and impressive religious buildings of pre-Islamic Arabia, now superseded.[10]

The Umayyad conquests in Egypt and the Levant provided the caliphs with considerable resources which enabled them to undertake major construction programmes, rebuilding and building from scratch, of both palaces and religious buildings, notably at Mecca, the Dome of the Rock in Jerusalem and the Great Mosque in Medina (which no longer survives), all built by 'Abd al-Malik, and the al-Aqsa Mosque in Jerusalem and the Great Mosque in Damascus, the work of his son, al-Walid I.

THE DOME OF THE ROCK (?684/5–?691/2)

The building known as the Dome of the Rock in Jerusalem was built by 'Abd al-Malik (caliph between 685 and 705), whose patronage of buildings was focused on Jerusalem, and either begun or completed in *c.* 691–2.[11] Why al-Malik built this structure here, whether it was built as a mosque, and why he adopted the unusual plan are all unclear. The site, the Rock on which it is built, was (and is) a site of considerable

significance to Jews and Christians, as the site of the Temple, of Abraham's sacrifice and of Adam's creation. The construction of a Muslim building on the site of the Temple certainly displayed the defeat of the unbelievers and perhaps intimated at their bringing in to the fold of the true faith. The scale and splendour of the building showed it as an assertion of the power and strength of that new faith and its new state, an avowal made against an ever-present Christian threat. But al-Malik was also in the process of fighting a civil war with other Arab leaders, one he did not win until 692: the Dome of the Rock surely also spoke to his contested position as ruler and the resources he could command: he reportedly used seven years' worth of the tax revenues of Egypt, the wealthiest province of the Roman and Byzantine empires, to pay for it.

What the building was is uncertain. It was perhaps a shrine, though it does not seem to have been built as a challenge to Mecca as a Muslim pilgrimage centre. The plan is striking. The Dome of the Rock was built as an octagon enclosing a dome mounted on a cylinder. The octagonal structure is about 60 metres in diameter, but only about 13 metres high, with two colonnades inside that enclose a rock at the centre and four doors at the cardinal points. The golden dome, in contrast, rises above to a height of over 20 metres.[12] Because the tradition of monumental building was a new one in the Umayyad world, it is likely that the form of the Dome of the Rock was adapted from Roman and Late Antique examples: the octagonal plan, for example, has caused it to be linked with Roman and Late Antique buildings in the west of the Mediterranean. However, since al-Malik did not go to Italy and was not familiar at first hand with the buildings of any of the great cities of the Roman Empire, except those in the lands he conquered, of which Alexandria, Antioch and Damascus were the largest and most significant, it seems more likely that he was influenced by imperial and Christian buildings that he had seen for himself, closer to hand.[13] Octagonal churches were built in the Levant between the fourth and sixth centuries, perhaps most notably the Church of the Ascension in Jerusalem itself, but also Qal'at Sem'an, the great pilgrimage church of St Symeon the Stylite near Aleppo, and the great Golden Octagon of Antioch, the cathedral of that city, which had been destroyed by an earthquake in 588 and never rebuilt.

These Christian buildings possessed mosaics and in its turn, the Dome of the Rock was originally decorated outside and inside with mosaic. Now, the exterior mosaics are almost all replacements but those inside are still largely seventh century. The edifice contains about 1,280 square metres of mosaic in all, including a frieze of text some 240 metres in length running around the outer and inner faces of the octagon. It is the largest surviving mosaic programme until we reach the twelfth-century Christian mosaics in the cathedral at Monreale in Sicily.[14] The mosaics are all aniconic, with an astonishing range of ornament (Fig. 99). Trees, fruits and garlands abound; there are leaves, shells, vases, baskets, crescents and stars, scrolls and cornucopia, and a range of decorative borders and of formal decorative elements such as rosettes and palmettes. The motifs employed derive from across the whole vocabulary of Late Antique art in the Mediterranean (acanthus designs, for one) and Sasanid Persia (the stylised trees with their tulip-shaped flowers, for example).[15] Symmetry was clearly an important consideration, as was the use of colour, varying from subtle tones of blues and greens to sharply alternating tones of red and green in some of the garlands, for example. Blues and greens dominate on the gold background. Red, silver and mother-of-pearl are used as highlights. In contrast to its use in Ravenna and Poreč, the mother-of-pearl tends to be used in surfaces that face away from the light, thus working almost as a form of artificial lighting. In less conspicuous

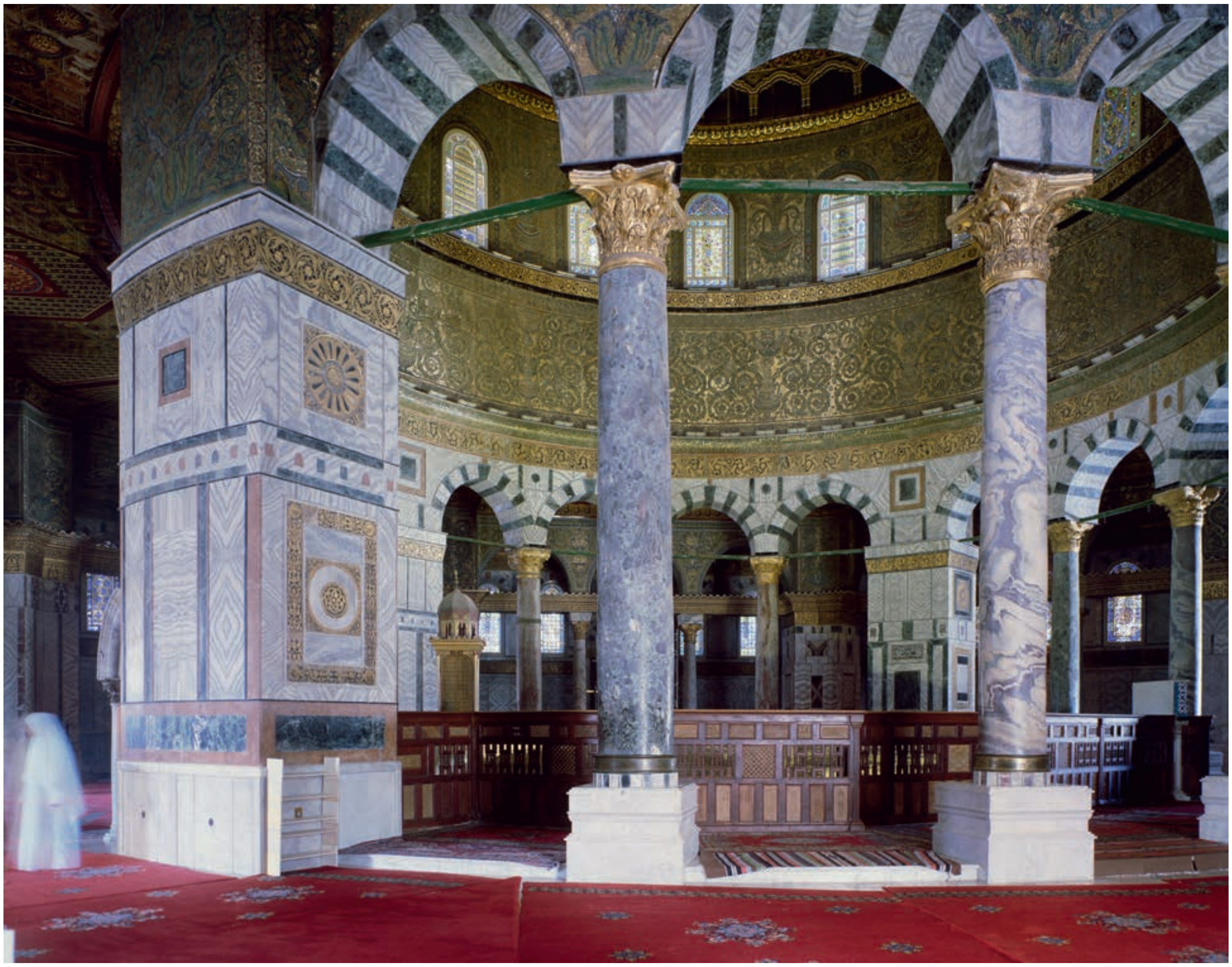


Figure 99 View of the Dome of the Rock, seventh century, showing the ornamental plant scrolling around the inner and outer sides of the central octagon.

parts of the programme, as with other more valuable materials in other mosaics, the mother-of-pearl is replaced by white paint or paste. The extensive inscription is made of gold letters on a turquoise background, a combination of colours that was used widely in Christian mosaic inscriptions and which was to prove popular in manuscripts of the Qur'an.[16]

Technically, the mosaics are sophisticated, especially in the ways in which the medium interacts with the form of the building. The compositions overflow from one wall onto the next, a device that serves to tone down the angle of the walls, creating a sensation of continuous movement. It is a part of the modulation of the design to the architecture, and one seen in mosaics in the Christian world – the question of how to cope with the edges – though there the problem is less acute because scenes tended to be broken up into discrete architectural areas. In this Islamic context, the enfolding effect of mosaic, softening the edges inside and out, may have echoed the Ka'aba in Mecca which was decorated with changing textiles.[17] In the Dome of the Rock, the use of flickering lamps presumably added to this effect. Although the same sequences and units in the decoration recur, creating a sense of a continuity of design without beginning or end, certain parts of the mosaic are set in such ways as to be more obvious or brighter

than others, particularly from the viewing points – such as the four entrances – dictated by the architecture.[18] The inner face of the octagon, for example, is more colourful than the outer and is enhanced and brightened with mother-of-pearl inlays.

It is possible to see maybe two or three teams (who could have all belonged to the same workshop) at work on the design as a whole and in the setting of the text, where it is clear that the letters were set first and then the background mosaic.[19] The writing may well have required an input from Arabic calligraphers familiar with the script, though, interestingly, the system of parallel lines and grids for marking the writing out which is traceable on the mosaic seems to have been highly influential in the development of Islamic calligraphy.[20] Underdrawing has been noted: red for gold and silver; dark grey for green and blue.[21] Similar underdrawing has been noted at the Great Mosque in Damascus and on a mosaic from the market at Baysan.[22]

The mosaics of the Dome of the Rock are ornamental and aniconic. The Qur'an does not forbid the figural representation of humans but it does oppose the worship of idols, and a fear of idolatry, one we shall see later in the eighth century in Christian Byzantium and the Iconoclastic dispute there, led to a preference for avoiding representational art in public at least. But no aniconic imagery is ever simply decorative. It is highly likely, as with figural imagery, that the choices and uses of motifs were deliberate, not just aesthetic, responses to themes appointed by the patron. For example, many of the jewel motifs – in the form of actual crowns, necklaces, bracelets – are identifiable as pieces of Byzantine or Persian imperial regalia.[23] Thus, in different ways, they were symbols of holiness, power and sovereignty and may, like the architecture of the building, suggest the defeat of the unbelievers and their bringing into the fold of the true faith.[24] The mosaic inscription itself was meant to be read, at least in parts, for the writing is clear and certain key words or phrases are highlighted.[25] It too made a statement about the victorious presence of Islam in the Christian city of Jerusalem and conveyed a sense of mission and of eschatology.[26] The ultimate receiver of the messages of the inscriptions was meant to be – as in a Christian church – the divinity, Allah in this case. Jesus appears in his Muslim role; the mosaics exalt God's glory and supreme sovereignty; they highlight a paradisiacal landscape; various subtle visual markers hint at Muslim beliefs about sanctity.

The Dome of the Rock was the climax of al-Malik's building programme. In it, he took some of the prestigious elements of Roman Christian art that he could see around him – the form of the building, the costly materials, both marbles and mosaics, the commemorative inscription – and translated them into his own language.[27] In so doing, he maintained the conceptual status of these aspects: among his aims as caliph were the need to consolidate the Muslim polity, and to construct a strong, viable state with a distinct religious identity of its own in the midst of all its Christians neighbours and rivals. The Dome of the Rock provided a visual display of this last.

THE GREAT MOSQUE, DAMASCUS (706–714/15)

It was a theme maintained by his heir. The al-Aqsa Mosque (?709–15), also on the Temple Mount, may have been begun by al-Malik; it was certainly finished by his successor and son, al-Walid, replacing an earlier seventh-century structure. The drum of the dome and walls below both have mosaics, though these are now covered in whitewash. Both buildings, and their mosaics, continued to be venerated and repaired by both the successor dynasties to the Umayyads, the Ayyubids



Figure 100 Exterior mosaics on the Bab al-Barid entrance to the Prayer Hall, Great Mosque, Damascus, eighth century, lavish in their acanthus scrolling and trees.

and Mamluks alike. Al-Walid (705–15), following his father's policy of lavish buildings, also built and decorated (including with mosaics) the Great Mosque at Medina (706–10), another prestigious building on the second-holiest spot in Islam, and the Great Mosque of Damascus (706–14/15), his most spectacular construction.[28] These mosques were by far the largest building projects of the period, surpassing anything we know of in Rome or Constantinople at the same time.

The Great Mosque provided the ultimate model for congregational mosques in Syria; it also changed the urban landscape of Damascus.[29] It carried considerable religious sanctity through its association with the Islamic conquest of Syria and with the Companions of the Prophet responsible for that conquest. Further, it was built on a site which housed the city's Cathedral of St John, itself built over the Roman Temple of Jupiter, again asserting the supremacy of the Muslim faith, just as the Christians had proclaimed their triumph over the pagans. The Great Mosque is very different in plan from the Dome of the Rock. A rectangular prayer hall with a monumental entrance façade occupies the long side of a court with colonnaded arcades on the other three sides. The prayer hall itself, a tall rectangular structure, has resonances of both Christian basilical churches and imperial government buildings. However, whereas a Christian church conventionally runs east to west along the long axis of the building, the axis of the Great Mosque is north to south across the short axis. It was filled with reused marble columns and capitals and was decorated with mosaics inside and out, arcades and prayer hall alike (Fig. 100). Large surviving sections of

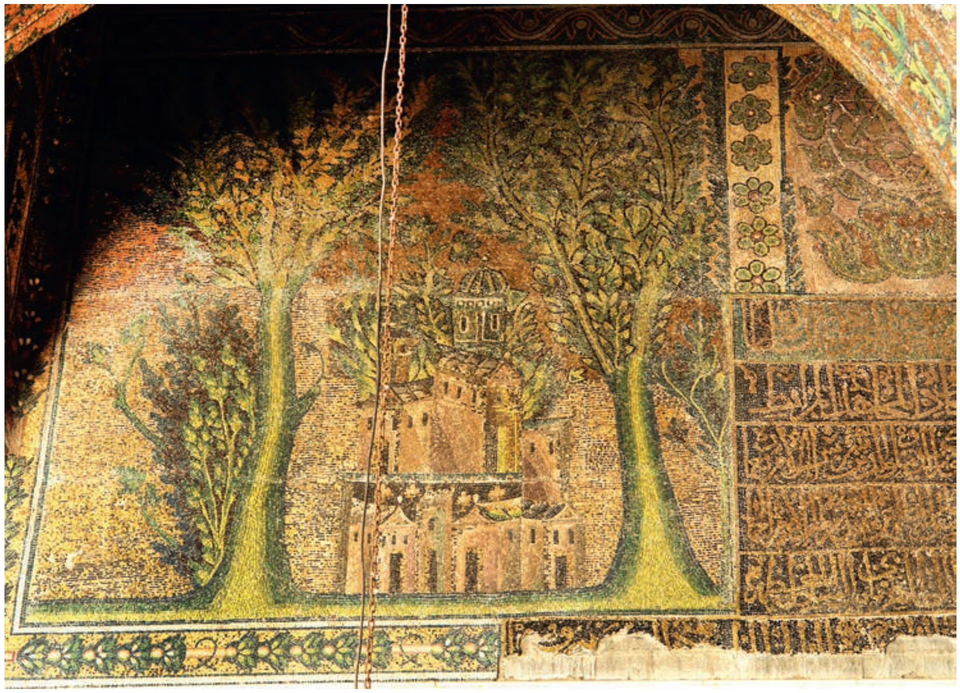


Figure 101 Detail of one of the panels with trees and a city, and part of an inscription in gold lettering on blue, Bab al-Barid, Great Mosque, Damascus, eighth century.

the mosaics are original but there have been considerable repairs, first documented in the eleventh and twelfth centuries but as recent as the 1960s.[30] The palette – largely greens and blues on a gold background – is very close to that of the Dome of the Rock, but, in contrast, the decorative programme, again with no living creatures, consists of combinations of buildings (ranging from elaborate palaces to small houses) in landscapes with rivers, naturalistic trees, acanthus scrolls and plant candelabra (Fig. 101). The Late Antique elements of style visible in the Dome of the Rock elements are clear (in the acanthus again), but Sasanian elements seem lacking.[31] The imagery is sometimes seen as a pastoral fantasy, the evocation of a sense of the oasis so important in the world of the desert Arabs, or interpreted as carrying resonances of paradise; it also reflects Islam's opposition to figural images.[32] It is possible to see Byzantine motifs – the hanging pearl, for example – and possible also to see in their use a playing-out of Umayyad relations and assertions with respect to the Byzantines.[33] Some of the architectural and decorative elements seem also to refer to Alexandrian art (one such is the 'Nile' boat in the north arcade).[34] But more local associations are also apparent, most clearly in the relationship between the architecture of the mosque and earlier architecture in Syria. Indeed, the inspiration for the wall mosaics could easily have come from regional floor mosaics, for if Syria and Palestine became Muslim with almost no destruction, there need not have been much disruption to the arts and crafts of the area, making their imitation and exploitation all the easier.[35]

ISLAM AND MOSAICS

These buildings, the Dome of the Rock, the Great Mosque in Damascus, and the Great Mosques of Mecca, Medina and, later, Cordoba, at the holiest sites of Islam, were hailed as wonders of the Islamic world. The Great Mosque itself was perceived as the crowning glory of Damascus. In the words of the twelfth-century

author al-Idrisi, 'In Damascus there is the Mosque, the like of which building exists in no other place of the earth, nor is any more beautiful in proportion, nor any more solidly constructed, nor any more securely vaulted, nor any more wonderfully planned, nor any more admirably decorated with all varieties of gold mosaic work, and enamelled tiles, and polished marble.'[36] Writings about these mosques and also their use of mosaic suggest an aesthetic appreciation of the reflective, light-enhancing properties of mosaic, one shared with Christians, and both the Dome of the Rock and the Great Mosque played a significant role in the creation of a distinctive Muslim aesthetic. The influence of the Great Mosque in particular resonated through the Muslim medieval world, its architecture and decoration copied and echoed in mosques including those of Samarra (in the ninth century) and Cordoba (tenth century) at opposite ends of that domain.

But it was not just their beauty that was admired. The buildings and their fixtures and fittings, especially their mosaics, were seen also as a glorious and continuing Moslem triumph over their Christian and Byzantine neighbours and their marvellous churches.[37] They all cost a great deal: the Dome of the Rock supposedly seven years' worth of tax from Egypt; and the Great Mosque several times the annual land tax of Syria, said to be something between 600,000 and 1,000,000 dinars.[38] The 'true' expenditure mattered less, perhaps, than the idea of the vast and overhelming outlay poured into these buildings that the figures indicated. Few other medieval constructions, east or west, Christian or Muslim, could rival them and their expanses of wall mosaics. Muslims were aware of the outflow of resources, for they provoked a level of civil unrest, but clearly al-Malik and al-Walid felt it was all well worth it. Later generations made it clear that they were not alone. In the late tenth century, al-Muqqadasi claimed that the Dome of the Rock had been built on the scale and ostentation it was to out-do the great Christian churches of Syria and Jerusalem (he did not mention Constantinople) and to give the Muslim community something as wonderful of their own.[39] Ibn Asakhir (d. 1176) told a story that when Caliph Umar II (717–20) planned to destroy the mosaics of the Great Mosque, he changed his mind when Byzantine envoys declared that 'whoever built this mosque is definitely the king of a long-lasting nation', a tale underlining both Muslim pride in the mosque and their sense of triumph over local rivals.[40] These mosques were visible statements of Muslim supremacy and permanence, just as the Lateran and St Peter's in Rome and Hagia Sophia in Constantinople were for Christians. And in many ways, those whom the mosques were designed to impress were as much internal, Muslim audiences as external Christian ones, a display to believers rather than unbelievers of the superior, correct faith.[41]

Mosques, as buildings, increasingly became one of the defining features of urban life in Islam, a focal point for the faithful. Their developing significance, political as well as religious, is apparent in the scale of the great mosques such as those of Medina and Damascus, but also in their increasing construction in the towns of the expanding Islamic world. Where urban churches and their elites had assumed temporal and spiritual leadership, gradually under Islam the number of functioning churches decreased and the number of mosques grew.[42] Just as their architecture was in part an appropriation of Christian and imperial architecture, so too was their decoration. The Dome of the Rock and the Great Mosque were unlikely to have been alone in containing marble revetments, reused marble columns and capitals, fixtures and fittings (lamps, candelabras) in precious metals, in short all the sorts of equipment that a prestigious Christian church or imperial building – government or palace – would possess.[43] Mosaics were a part of this. The Arabs did not have mosaics, and the Arab word for mosaics, *fusaifisā*, appears to be

a version of the Greek word ψῆφος.[44] So the use of mosaic in Islamic mosques in the seventh and eighth centuries was a politicised choice: the use of this medium formed a challenge to Christianity through the appropriation (alongside marble) of what must have been recognised as one of the most typical and lavish forms of church and perhaps also imperial decoration.

ISLAMIC MOSAICS – REALLY BYZANTINE?

However, the issue that has most bothered art historians has been framed around the question as to whether the materials of the mosaics and their mosaicists were Byzantine. The conventional line is that they were. This is supported in two ways. The first is that the evidence presented in a series of sources is definitive proof of the Byzantine origin of both workmen and materials. Several Muslim authors claimed that the Byzantine emperor either sent or was compelled by the caliph to send workmen and materials to the Great Mosque in Medina, the Dome of the Rock, the Great Mosque in Damascus and, eventually, the Great Mosque of Cordoba. The second line of argument proposes that the mosaicists must have come from Constantinople as only the capital of the Byzantine Empire was able to maintain at that time a corps of craftsmen capable of the high technical competence found in the Dome of the Rock.[45] Both positions are plausible but both can be interrogated.

To begin with the material presented by the written sources. Christian sources that describe the construction of the mosques do not mention Byzantine artists or mosaicists; rather they just claim that al-Walid demolished churches and replaced them with mosques.[46] The Muslim sources, however, take a different line.[47] Perhaps the earliest reference is that made by the ninth-century author al-Baladhuri, who claimed that in 707–9, al-Walid sent money, mosaic, marble and eighty Rūmı (often translated as 'Greek') and Coptic artisans from Syria and Egypt to the Governor of Medina for the rebuilding of the mosque there.[48] Writing in the same century, al-Ya'qubi claimed that the Greek emperor (who would have been Justinian II) sent 100,000 mithqals of gold (about 425 kg), 100 workmen and 40 loads of mosaic to the Great Mosque in Medina. This was echoed by al-Tabari, an author of the late ninth or early tenth century, who described the Sultan of Rūm as sending al-Walid 100,000 mithqals of gold, 100 workmen and 40 loads of mosaic for Medina, as well as ordering a search for tesserae in ruined cities, which were dispatched to al-Walid, who sent them on to Medina.[49] Another tenth-century writer, al-Muqqadasi, detailed 18 shiploads of gold and silver as being sent from Cyprus, as well as tools and mosaics from the King of Rūm (the Byzantine emperor), to the Great Mosque in Damascus; he also described workmen being sent from Egypt.[50] To achieve his ends, the caliph is said to have threatened the emperor with the destruction of churches in Muslim lands. In contrast, al-Wasiti, writing before 1019, gave an account of al-Malik's work at the Dome of the Rock, making it very clear that he had gathered craftsmen from his dominions, not from Byzantium.[51] The *Book of Gifts and Rarities* (*Kitab al-Hadaya wa al-Tuhaf*), probably a late eleventh-century work, claimed that the emperor sent al-Walid 100,000 mithqals of gold, 1,000 workmen and 40 loads of mosaic for the Great Mosque of Damascus, figures remarkably similar to al-Ya'qubi's for Medina.[52] Two twelfth-century authors, Ibn Asakir and Ibn Jubayr, both stated that al-Walid demanded money and men (200 according to Ibn Asakir and 12,000 in Ibn Jubayr's account) with menaces from Byzantium; this version of events then recurs time and again in subsequent sources.[53] Al-Samhudi (d. 1506), for example, extracting from Ibn Zabala's *History of*

Table 9 Islamic sources on Byzantine mosaicists, ordered by date

AUTHOR	DATE	SITE	DETAILS
al-Baladhuri	*c.* 868 and d. 892	Medina	al-Walid sent money, mosaic, marble and 80 Rūmı and Coptic artisans from Syria and Egypt
al-Ya'qubi	*c.* 875	Medina	the Greek emperor sent 100,000 mithqals of gold, 100 workmen and 40 loads of mosaic
al-Tabari	d. 923	Medina	the Sultan of Rūm sent al-Walid 100,000 mithqals of gold, 100 workmen and 40 loads of mosaic as well as ordering a search for tesserae in ruined cities, which were sent to al-Walid
al-Muqqadasi	*c.* 985	Great Mosque in Damascus	18 shiploads of gold and silver from Cyprus as well as tools and mosaics from the King of Rūm; workmen also sent from Egypt; the caliph threatened the king with the destruction of churches in Muslim lands
al-Wasiti	before 1019	Dome of the Rock	al-Malik gathered craftsmen from his dominions
al-Idrisi	1099–1161	Cordoba	al-Rahman III obtained tesserae from the Byzantine emperor
Book of Gifts and Rarities (*Kitab al-Hadaya wa al-Tuhaf*)	probably late eleventh century	Great Mosque in Damascus	the emperor sent al-Walid 100,000 mithqals of gold, 1,000 workmen and 40 loads of mosaic
Ibn Asakir	d. 1176		al-Walid demanded money and 200 men with menaces from Byzantium
Ibn Jubayr	1184		al-Walid demanded money and 12,000 men with menaces from Byzantium
Ibn Idhari	*c.* 1312	Cordoba	The caliph asked the emperor for a capable worker
al-Samhudi extracting Ibn Zabala's *History of Medina* (*c.* 814)	d. 1506		al-Walid wrote to the emperor and was sent mosaic cubes and 'twenty-odd' workmen

Medina (written *c.* 814), repeated the story about al-Walid writing to the emperor and being sent mosaic cubes and 'twenty-odd' workmen.[54] In the case of Cordoba, al-Idrisi claimed al-Rahman III got the tesserae for the qibla from the Byzantine emperor, and Ibn Idhari asserted that the caliph asked the emperor for a capable worker, 'in imitation of' al-Malik and the Great Mosque in Damascus.[55] Table 9 summarises this information.[56]

But how to understand these accounts?[57] On the one hand, they may record (fairly) true events, passed down via oral tradition before being written down. That mosaic appears to have been used in only a few cases may indicate that artists and materials were required from beyond the Moslem world.[58] Further, the restriction of a Byzantine role to Damascus and Medina, with no mention of either the Dome of the Rock or the al-Aqsa, suggests that the story was neither an essential topos nor a cliché.[59] The divergences between Ibn Asakir and Ibn Jubayr hint at two different versions of the story in the eleventh and twelfth centuries. Since both authors ultimately appear to depend on the same late ninth-century sources, that of al-Asadi (d. 899), it might be argued that both described a genuine event, though al-Asadi too was writing some two hundred years later. The telling and retelling of the story may underline its veracity rather than its plausibility.

On the other hand, these accounts may tell a believable story rather than a true one. Indeed, is the survival of 'oral tradition' a good enough reason to believe what the first reference to these events, over 100 years later, tells us?[60] The further from the events they purport to describe, the more the details of the stories change and expand, in almost mythical ways.[61] Al-Baladhuri, the author closest in time to events, some 150 years later, mentions 80 workmen, Rūmı, Egyptian and Syrian, being sent to Medina. After that the numbers start to increase in suspiciously round terms – 100 workmen; 100,000 mithqals of gold; 40 loads of mosaic. By 1184, 12,000 workmen are being summoned to Damascus and the Great Mosque. By the tenth century, the caliph starts to write directly to the emperor and make demands coupled with threats. And the story and numbers are much the same, whether the mosque is in Damascus, Cordoba, Medina or even Mecca.[62] We might think that, in ideological terms, the idea that the all-mighty Christian emperor was compelled to help out the caliph at the caliph's instigation with men and materials was always likely to be a popular one with a Muslim audience.[63]

Nor is it clear that the workmen should always be understood as Byzantine (i.e. from within the Byzantine Empire) rather than Christian. Are Baladhuri's Rumı better understood as Levantine Christians, or as Greek-speaking Christians in the Levant, in contrast to the Syriac-speakers, rather than as 'Byzantines'?[64] Rūm and Rumı seem to have been somewhat all-purpose labels, covering on occasion Classical Greeks, Romans, Byzantines and Syrian Christians.[65] Workmen from Syria and Coptic (i.e. Christian) Egypt are recorded by both al-Baladhuri and al-Muqqadasi. Anastasios of Sinai saw Egyptian workers helping clear the Temple Mound between *c.* 658 and 660.[66] The Aphrodito Papyrus of 709–14 records forty skilled Egyptian workmen being despatched to the Great Mosque of Damascus.[67] Christian artists seem to have been active in other artistic fields in the Islamic world: artisans trained in Byzantine and Syriac scriptoria probably worked on Islamic manuscripts, notably the Sana'a Qur'an.[68] Alain George has made a convincing case for mosaicists and calligraphers sharing the same skills and practices, especially in terms of laying out the lettering. At Medina, it seems likely that the calligraphers who worked on the mosaics also went on to produce and decorate Qur'anic manuscripts; the illustrations and calligraphy of the eighth-century Sana'a Qur'an share similarities with the decoration of both the Dome of the Rock and the Great Mosque.[69] Were such artists Christian or Moslem? In this context, it is worth noting that, in similar vein, and also at a temporal remove, al-Masudi (896–956) reported that after Justinian I was forced to make peace with the sixth-century Sasanian ruler Khusrau I, Khusrau took marbles, mosaics and stones back with him as loot from Syria, using them, 'imitating Antioch and other towns of Syria', in the construction of a new city that he called Rumiya in his own territories.[70] These materials were used to build a Syrian-style city, symbolising the victory of the shah over the emperor. Again, whether this is 'really' what happened is a moot point, but whether it did or not, the suggestion is that these workmen were Syrian, implying that even in the ninth century, the idea of Levantine Christians with the skills and the materials for making mosaics was a reasonable one. These accounts are very tangled reports which appear to depend on each other, or share traditions, and the repetition of figures between Medina and Damascus is suspicious. Did Cordoba perhaps get brought in because of the prestige attached to the story? Of course, events can become garbled and even moved from one place to another (the emperor may have sent help to Medina but that help might have been transferred over time to Damascus). But the sources

are at best confusing and can be taken either way. For me, the evidence for 'Byzantine' mosaicists and materials being sent to the caliph has the ring of a 'good story'.[71] It reflects Muslim views of Byzantium as a civilised kingdom of great wealth and great achievement in arts and crafts, as well as a perception of Byzantium as a military power to be reckoned with, and as an antagonist and rival.[72] The 'Byzantine artists' are also a motif that shifts over time, moving towards asserting a more proactive threatening role on the part of the caliph from the tenth century onwards. Might this indicate a response to growing Christian Byzantine and Western threats? The First Crusade was preached in 1095; Saladin regained the Latin Kingdom of Jerusalem in 1187. The appearance of these claims in the works of authors such as Ibn Asakir and Ibn Jubayr might well have been designed to assert Muslim triumphs over the old enemy, just as the very use of the medium of mosaic itself might have done.[73]

The reverse of discussions about Byzantine artists working at Medina, Damascus and Cordoba is the practical question of how far the empire and its ruler would have wanted (or needed) to assist the Umayyads, who had, after all, besieged Constantinople ten years previously, between 674 and 678. In the case of both the Dome of the Rock and the Great Mosque, the caliph was building on the site of (and almost certainly using the materials from) major Christian churches, not a comfortable association for any emperor. Byzantine sources, notably the chronicler Theophanes, expressed their outrage at the destruction of the Cathedral in Damascus: 'The wretched man [al-Walid] did this out of envy of the Christians because this church was surpassingly beautiful.'[74]

And that brings me back to the second point of whether the materials and the artists had to come from Constantinople. Whilst it is fair to say that 'Byzantine' craftsmen were respected by the Muslims, that in itself is not proof that they worked on the mosques.[75] Any thoughts that only in Constantinople could mosaicists of sufficient standard be found can be dismissed briskly: the previous chapter marshalled the material for high-quality mosaic-making in sixth-century Rome, Italy and the Levant by mosaicists who were not necessarily based in Constantinople.

Al-Malik may well have not needed to look any further than the Levant, already part of his empire, for his materials and artists. We know that glass production continued in the Islamic Levant, with major primary and secondary glass-making factories and workshops in the important Umayyad and Abbasid city of Raqqa in the seventh and eighth centuries and Baghdad; and Jewish glassmakers, for example, continued to work in Jerusalem.[76] It is also highly probable that there was a lot of glass mosaic strewn around the Levant in ruined or disused Roman and Byzantine buildings, palaces, imperial buildings, churches, baths and villas, that could be recycled and reused, at Petra for example, or Sergiopolis (Resafa) – as seems also to have been the case in Rome, and indeed Constantinople in the ninth century.[77] Indeed, one tradition suggests that al-Walid had the material for the Great Mosque at Aleppo brought from the church at Cyrrhus.[78]

It is also apparent that mosaic was also used more often than has been suspected in the Muslim Levant. It was widespread in the Christian Levant and it continued to be used after the Arab conquests; it was not restricted to the great mosques. Churches continued to be built and decorated even after the Islamic conquest, and Christian mosaic-making continued – in the church of St Anna (or St Anastasia) in Jerusalem, for example. In Egypt, at Saqqara, the gold mosaic in the semidome of the crypt of the main church may date to after the Arab conquest.[79] In 718, at Umm al-Rasas, a huge mosaic pavement was laid in the church and

a mosaic floor was added to the bema in 756. There may also have been mosaic added to the Church of the Holy Sepulchre in Jerusalem.[80] At Baysan (Bet She'an), an Arabic mosaic inscription with gold letters on a blue background was found under the ruins of the entrance gate to the Umayyad market in the south-east of the city. It was probably put up in 737/8.[81] A similar Arab inscription of a similar date is known of from Acre.[82] Wall mosaic was used in the Umayyad palace at Qastal, possibly from the time of al-Malik and perhaps comparable to the Dome of the Rock, and at the palace at Khirbet al-Miniya, and a workshop containing thousands of loose tesserae was found at Qusayr 'Amra.[83] In the extensive mosque building of the seventh and eighth centuries, mosaic was employed in several significant cases (and presumably more widely than is documented): the Great Mosque at Aleppo was constructed by al-Malik's brother, Sulayman, to rival Damascus, and it too contained elaborate decorations, marbles and mosaics.[84] Besides, architectural glass was used in five of seventeen Umayyad 'desert palaces'.[85] Furthermore, floor mosaics continued to be made in some quantity in the Levant into at least the eighth century, and if the aniconic imagery of the mosques does not owe something to traditions of floor mosaic-making it would be a great surprise.[86] The existence of mosaics in Antioch, Gaza, Lydda, Edessa, Sergiopolis and Kartmin, to pick a handful, has already been used to propose regional mosaic workshops in existence in the fifth and sixth centuries. The sustained regional use of mosaic suggests that these putative workshops continued to function; if so, they could have provided al-Malik with the mosaicists he needed, the 'local' Christian Syrian and Egyptian and Coptic workmen who had some (if not considerable) expertise in wall mosaic-making and a great deal of experience in floor mosaic-making, a medium where the aniconic and decorative was used in profusion.[87] Elsewhere, 'Rūm' labourers are recorded as working at 'Anjar (south of Baalbek) in the early eighth century: these are more likely either to have been captured from Byzantine territories or to have been indigenous workers. Coptic and Nestorian workers are also known from the site.[88] Egypt as well should be thrown into the mix: it is plausible that Alexandrian mosaicists and workmen shared the work with Syrian artisans, for Alexandria was another major artistic and cultural centre in the east Mediterranean.[89] These artists would have trained others, possibly Christian, possibly Muslim, to continue the craft. In terms of 'Rum' and 'Byzantine' as well, we might wonder how the architects and mosaicists defined themselves.[90] Indeed, how great were the divisions in the Early Islamic Levant? Syrian Christians appear to have used the Great Mosque in Damascus as a holy place; Muslims seem to have used Christian churches.

Those historians in favour of the exchange of workmen and tesserae make a strong case that both trade and diplomatic relations between Byzantium and the Umayyad state continued throughout the seventh and eighth centuries. There are mentions of Rūm traders in Syria; al-Walid is recorded as preparing a gift of pepper for the emperor in a ninth-century source.[91] This can, however, be cut a different way: traders are not necessarily representatives of the emperor; pepper is not necessarily a gift on the same scale as artistic skills. Whatever was going on in trade terms, the political circumstances of the seventh and early eighth centuries were not conducive to high-level, prestige-laden artistic exchanges. Between 688 and *c.* 692–5, al-Malik was actually paying tribute to the emperor, Justinian II; later, al-Walid was at war with Byzantium, and there is no record on the Byzantine side of any sort of treaty under whose conditions the emperor might have been compelled to send money, men and materials to him, nor does there seem any reason that the

emperor might have done so out of the goodness of his heart and to promote cultural exchange, not to mention the building of a heretical mosque. It seems improbable.

Perhaps more interesting than whether actual Constantinopolitan mosaicists came to Damascus is the question of from where al-Malik and al-Walid got their ideas.[92] How far the mosaics of the Great Mosque of Damascus were 'in dialogue' with Constantinople is difficult to know, but just as the Dome of the Rock and indeed the Great Mosque reflected architectural traditions in Syria and the Levant, so too did their decoration in mosaic and marble, current in lavish and prestigious buildings throughout the region.[93] Neither al-Malik nor al-Walid ever saw Constantinople but they would have been familiar with the buildings of the great cities of the Levant: indeed, al-Muqqadasi suggested that al-Walid was inspired by what he saw in Syria in the churches there, wanting to create something similar in mosaic. It is surely here we should look for their inspiration and workmen. However, I would also suggest that the medium itself was a powerful message, and that, simply by using mosaic, al-Malik made reference to the traditions of the (Christian) Roman Empire that lay all around him in the form of Late Antique cities and towns. In a way similar to its continued use in both the West and Byzantium, mosaic as a medium perhaps carried enough overtones of imperial power, as well as religious triumph, to be worth appropriating.[94]

My view is that Islamic mosaics were no more 'Byzantine' than the mosques of the seventh and eighth centuries were 'really' churches. In both the Dome of the Rock and the Great Mosque, it seems reasonable to say that local forms in architecture and decoration were taken and adapted for specific needs: both buildings had different functions and meanings. As it is increasingly recognised that the Arab conquests in the Levant did not cause as much death, collapse and confusion in the region as has been posited, that Christianity remained a force in the Levant without Byzantium well into the late eighth century and that there was continuity as well as change, so it becomes less necessary to see a breakdown in local industries.[95] But equally, in the eighth century, Jerusalem and Damascus were a long way in cultural and social terms from Constantinople and Rome. In the caliphate, Arabic was replacing Greek as the language used for public purposes and Christian debates took place in written Arabic: two of the most significant theologians of the period, Theodore Abu Qurrah and John of Damascus, were 'Arab Christians'.[96] Muslims had an interest in Christian holy sites: at Sergiopolis (Rusafa), a mosque was built adjacent to the church. Mosque building and decoration formed part of a desire to establish and display Islam as a great and glorious faith; establishing the status of its holy places offered a rival to Christian pilgrimage. The mosaics of the great mosques of the Early Islamic world formed a part of that challenge, a statement of the legitimacy of Islam in place of Christianity. The medium itself offered a means for 'Abd al-Malik and al-Walid to assert their appropriation of both the Christian Byzantine and the Roman empires and as a part of conscious creation of a broad, specifically Umayyad sphere of culture. Mosaic seems to have gained a specifically Umayyad significance, for later in the caliphal mosques of Samarra and Cordoba it was used consciously and deliberately to evoke both the great early Umayyad caliphs and their building works.[97]

MOSAICS IN BYZANTIUM

In contrast to Arab and Muslim expansion, for the Christian Byzantines the seventh century was a period in which the empire both shrank, as Justinian's conquests in Persia, North Africa and

Italy steadily disappeared, and came under increasing threat: in the north from 'barbarian' invasions; and in the east, first from the Persians and then from the Arabs. The empire lost perhaps two-thirds of its land and three-quarters of its wealth in the 610s to the Persians; the Islamic conquests ensured that this was a permanent forfeiture.[98] As if losing so much to the east was not enough, Justinian's Western Empire was also gradually whittled away. Africa and northern and central Italy would be gone forever, though pockets in Italy would be clung on to – Sicily into the 820s, southern Italy until 1050. On top of this, the empire faced invasions to the north from Slavs, Avars and Bulgars. Constantinople was besieged in 626 and again in 717–18. Despite the pressures that all of these events caused, coupled with a range of natural disasters and periods of imperial instability (the usurpations of Phokas and then Heraklios in the early seventh century; the run of six short-lived emperors between 695 and 717), the basic structures of central government survived, and with them the empire. Although in the mid-seventh century Constans II based himself in Syracuse for five years, Constantinople itself continued to be a large city, relatively wealthy, and dominant as almost the only remaining great city in the empire.

Another unsettling aspect of the period was the so-called Iconoclastic dispute, which ran from *c.* 726 to 787, with a second instalment between 815 and 843. This was in part yet another theological controversy concerning the nature of Christ, but one whose focus lay on the role and understanding of Christian religious images; in part, a Christian answer to solving the problem of God's anger with the empire, cause of so many crises and disasters. Opinion is still divided as to how significant and widespread Iconoclasm was, but, either way, it did have a marked effect on Byzantine society, and it was an influencing factor in understanding the story of mosaics in this period.[99] Whatever the intensity and extent of Iconoclasm, there were specific, recorded acts of destruction of figural images in churches in the eighth and ninth centuries, though after this there were no further acts of hostility towards religious images.[100]

Only a handful of seventh- and eighth-century mosaics from within the empire are charted on Maps 4 and 5. How far this small number related to political pressures and warfare, economic aspects and a different use of money, artistic issues or problems with materials, or most probably a combination, can only be surmised. In the empire, seventh- and eighth-century mosaics survive in both Constantinople and Thessaloniki, the two major cities of the empire, and from several sites (on Cyprus, and at Amphipolis, for example) from where earlier mosaics have also been recorded, suggesting in both cases an existing and continuing tradition of mosaic-making. There is evidence for some in other important towns – Nikaea for one –where mosaic may or may not have existed earlier. There are also three mosaics from the far north-east of the empire, indeed across its borders in the independent kingdoms of Georgia and Armenia: at C'romi in Georgia, dated between 626 and 634, to the time of the construction of the church there (fragments of a mosaic from the conch of the apse survive, showing Christ between two angels with an Orant Virgin and the apostles below, done in fresco);[101] at Zvartnots Cathedral (640–61); and at Dvin (where the Mother of God in the apse has been dated to the eighth century). Sixth-century mosaic-making is known from the region but whether the quantity of mosaic surviving allows us to posit localised workshops, as with the Levant, is unclear.

Textual sources add little more to our knowledge of Byzantine mosaic in the period. The eighth-century *Patria* claims that the Emperor Phokas (602–10) decorated two columns, of Helena and Constantine, in Constantinople

with gold mosaic.[102] The *Patria* is an odd and difficult-to-understand text and this is a unique reference to this sort of use of mosaic, but nonetheless there is no reason that mosaic could not have been used in this way and at this time. For the eighth century, two more Constantinopolitan churches can be added to the list: the Church of the Mother of God at Blachernae, where the Iconoclast Emperor Constantine V is reported as destroying images depicting the life of Christ and replacing them with trees, animals, birds and plant scrolling; and the Church of the Mother of God of the Source, more commonly referred to as the *Pege*, where the Empress Eirene and her son Constantine VI are said to have had themselves shown in mosaic making thank offerings to the church and presumably its holy patrons.[103] Two other Constantinopolitan mosaics are mentioned by the written sources, both in the context of Iconoclasm: at Hagia Sophia, mosaics are reported as being destroyed by the Iconoclast patriarch, Niketas, in 768/9; and the *Patria*, again, claims that Eirene placed a mosaic image of Christ above the Chalke Gate of the Great Palace.[104]

In Constantinople, no seventh-century mosaics survive.[105] For the eighth century, however, the Church of Hagia Eirene still contains mosaics dating to this period.[106] The church, a large basilica, 100 × 32 metres, had supposedly been founded by Constantine and restored by Justinian. After it was severely damaged in an earthquake in 740, Constantine V reconstructed it and the mosaic cross surviving in the apse almost certainly belongs to this restoration, the only surviving Iconoclast mosaic. What it replaced is unknown. Mosaics fill the apse arch and semi-dome, originally extending over the eastern barrel vault of the nave.[107] in the apse, a huge cross is outlined in black (it must be dark blue, green or purple glass) against a gold ground (Fig. 18). It is set on three steps on a ground in two tones of green. The cross itself has flared ends terminating in tear-shaped serifs. Despite its apparent simplicity, the mosaic is of a high technical quality. The cross arms are not horizontal; they curve down, but the mosaicists have successfully composed the image to ensure that it looks horizontal from ground level. The gold background is interspersed with silver, one of the first times this technique is seen, and the tesserae are small and set very closely together, showing that no expense was spared. There is a (heavily restored) inscription on the bema arch and decorative patterned borders (Fig. 102).[108] The inner order of the bema arch also bears geometrical borders enclosing another inscription, generally unrestored.[109] The arrangement of the gold tesserae forming the background of the inscription is different from



Figure 102 Ornamental border and the beginnings of the inscriptions of the apse, Hagia Eirene, Istanbul, eighth century.

that of the rest of the mosaic: it has been modified and the tesserae tilted so that the greatest amount of light is reflected, another example of the careful craftsmanship involved.

In the same period, in Hagia Sophia, in the rooms in the part of the church labelled as the Small *Sekreton*, located at the gallery level of the church in the south-west corner of the building, mosaic bust images of Christ and the saints were picked out and replaced with crosses. The traces of the originals are still visible; since this is not an inevitable cause of replacing mosaic, then it suggests that this was deliberately so, perhaps to emphasise the superimposition of one form of image with another.[110] It is almost certain that these are the images mentioned in written sources as destroyed and replaced by the Iconoclast patriarch Niketas.

This Constantinopolitan mosaic material relates almost exclusively to Iconoclasm and to imperial actions. There was another mosaic, in the apse of the Church of the Dormition in Nikaea, from this same period, where a similar Iconoclast story is apparent. The mosaics of this church have a complicated history. The church itself is dated in the first instance to the late seventh or early eighth century, but it was destroyed in 1922, and recorded only in photographs from 1912. In these, the apse mosaic showed the Mother of God holding her Child, with the Hand of God emerging from the heavens above her head (Fig. 103). The conch was framed with geometric motifs and an inscription ran around it. However, the mosaic is relevant to the discussion here because traces of what it replaced are visible in the photographs. It is clear that the central figures were inserted in place of a monumental cross and that the cross itself was inserted in place of an earlier image, unknown but plausibly, because of the traces left behind, also of the Mother of God. The dating of the church makes it more than likely that the original image belonged to the late seventh century and that the cross was an eighth-century Iconoclast addition.[111]



Figure 103 The apse mosaic, Church of the Dormition, Nikaea. Behind the Mother of God can be seen the outline of a monumental cross believed to be eighth century.

A similar story is told of the Chalkoprateia church in Constantinople: here Constantine V is said to have destroyed the mosaics, replacing them with a cross which was in turn replaced with the images of Christ and his mother.[112] At Nikaea, it is possible to see how the layout of the cross arms was circumscribed by the area the mosaicist had to work in and so they appear to curve up; the cross is unique because it was placed on a footstool, surviving from the original image.

A fuller set of mosaics survives from seventh and eighth century Thessaloniki, sitting on either side of Iconoclasm and encapsulating some of the changes brought by it. The Church of St Demetrios reappears, with its mosaics dated to the later seventh century (perhaps the 670s), whilst the mosaics in the vault of the Church of Hagia Sophia date to the period 780–97.

St Demetrios and its mosaics have been encountered in both the fifth and sixth centuries in the form of the earliest panels from the inner west wall of the church, and the 'Maria' cycle along the north colonnade which probably predates a devastating fire in 620, though it may belong (or parts of it may belong) to the repairs made to the church in 604. In contrast, the seventh-century images widely agreed to postdate the fire are all single panels and almost all on the two large piers at the east end of the church at the end of the colonnades, flanking the bema.[113] On the west tribelon wall, facing the inner north aisle, a very badly damaged panel depicts a nimbed male saint, probably Demetrios himself, flanked by four churchmen: two bishops, whom Demetrios has his arms round; a priest; and a deacon.[114] On the east side of the north sanctuary pier is a panel showing a soldier-saint in an orans pose, usually identified as St Nestor. Below him is an inscription: 'a prayer for one whose name God knows'. On the west face of the same pier is a panel showing another soldier-saint in formal uniform with two children clearly under his protection – the saint has his hand on the shoulder of one and his blessing hand above the other (Figs. 104 and 105). A painted inscription identifies him as George, though he has also been seen as Bacchos (because Bacchos' brother St Sergios is across the way) or even as Demetrios. On the south side of this pier is a panel showing the Mother of God and an orant saint usually identified as St Theodore. She holds a scroll asking for God to hear her prayer; above them, a half-length Christ in a mandorla of blue reaches down towards his mother, as if answering her prayer.[115]

Moving across the church, but part of the same period and possibly the same campaign of decoration, on the west side of the south pier, in the same place as George on the north pier, is another soldier-saint, Sergios, in an orant pose and identified by inscription. Sergios, George and Nestor are all very similar in appearance: clean-



Figure 104 Mosaic of St George, northwest side of north pier, Church of St Demetrios, Thessaloniki, seventh century.

shaven, young and curly-haired. On the north side of this south pier, facing the bema, is Demetrios himself with the archbishop of Thessaloniki and a figure usually identified as the eparch of the city.[116] These two are not identified by name (though they are sometimes identified as the founders or the rebuilders of the basilica), and so they also appear as generic representatives of the two most important men in the city. Demetrios, showing his approval and support, has his arms around both. Neither man is haloed, but the battlements of the city behind them look almost like square haloes. On the east side of the pier, Demetrios stands with his arm over the shoulders of an elderly man, a deacon by his dress, and so second to the archbishop in the



Figure 105 Detail of the two children under St George's protection, north-west side of north pier, Church of St Demetrios, Thessaloniki, seventh century. Almost all the white in this mosaic appears to be stone.

hierarchy of the church. The deacon gestures to an inscription below which invokes Demetrios' help for citizens and strangers alike. This man bears a resemblance to the deacon shown in a set of three medallions and an inscription seemingly (as far as we can tell from the drawings) inserted into the mosaics on the upper level of the north colonnade.[117] Finally, close to this pier, there is a bust in the semidome of a small conch in the north wall of the south wing: a beardless saint in an orans pose who may be, again, Demetrios.

These St Demetrios mosaics, like the earlier ones, are more contained and personal than the great central apse images in so many other churches, which very often seem to make doctrinal and eschatological statements, and regularly formulate references to rulers and patriarchs. None of the surviving mosaics in St Demetrios was the defining image of the church: as I mentioned earlier, we do not know what was in the apse or on the nave walls. Instead, they occupy the end walls, the piers, the arcading of the nave. They emphasise the work of Demetrios and underline his holy powers. They are not the work of one or two major patrons, as far as can be told, nor do they make a coherent programme. Instead, they appear as a series of separate, independently commissioned panels around a specific theme: the role of the saint as healer and protector, and saviour of the city, a role that the *Miracles of St Demetrios*, a collection of stories about the saint dating in part to the seventh century, underlines.[118] The mosaics very obviously reflect the major function of the church as a healing sanctuary; indeed, the spatial arrangements of the mosaics on the walls of the nave may indicate

something of a route that those looking for healing might have followed around the church, praying at different spots.[119] The heart of the cult of Demetrios was his ciborium, the shrine in which the saint, despite the lack of tangible relics, was somehow present and efficacious. This was located in the nave between the spandrels of the arches, specifically at the point where the cycle involving the child Maria starts, and was surely a focus for those seeking the saint's help. So it seems no coincidence that so many of the miracle-mosaics occupy the registers above and around this site. The *Miracles* make it clear that Demetrios worked not through his images but by his manifestation, his physical appearance, in dreams or visions, as he is shown in the mosaics, present with those seeking his aid. So the mosaics should be seen as prayers to the saint, as indeed many of the inscriptions on them – 'a prayer for one whose name God knows' – show. They are *ex votos*, often thanking the saint for his help, but also imploring that help, and they form a record of the saint's power and munificence to his people. The images are also individual and personalised, to the point that specific individuals could, and perhaps still can, be identified. Furthermore, taken together, the images show an on-going veneration across several centuries of the saint and his miraculous powers, a continuing use and reuse of the church space.

But any family or individual who could afford to commission a mosaic panel recording Demetrios' favour and have it located in the church was wealthy and socially significant enough to be a member of the elite.[120] Not only was Demetrios a healing saint as the cycle on the nave wall shows; he was also a focus of urban identity, as the images of the saint embracing civic and ecclesiastical officials, eparchs, deacons and bishops suggest. The same is true of a further mosaic panel on the exterior of the church (this is not the one there now), placed there as an *ex voto* to confirm the healing of the eparch, Marianos.[121] Why such an image was installed outside the church is unknown, but the eparch of the city could surely choose where to put his panel. It does suggest that locating such panels outside buildings was not unknown and we shall see further examples of exterior mosaics in the next chapter.

By the seventh century, Thessaloniki was a city on the frontier of the Byzantine Empire, attacked and besieged by the Slavs throughout (615, 618, in the 670s, for example), beset by earthquakes (620) and famines. Throughout the period, as the *Miracles of St Demetrios* make clear, the saint was ever-present protecting his city and delivering his people. It was a city in which church leaders became increasingly important – as their images on the walls of the church also bear witness – and one in which the wealthy used their money to enrich the city's churches, retaining the saint's support in these perilous times, displaying his power to all who cared to look.[122] The mosaics played a significant role in highlighting both the good and the great of Thessaloniki but also their very personal and intimate relationships with Demetrios. In St Demetrios, the mosaics made the saint himself perpetually visible to worshippers and pilgrims alike, a constant image of his ability both to heal the sick and to protect, not just children but the very city itself.

The other surviving mosaic in Thessaloniki, that in Hagia Sophia, is very different, being central and imperial. The church of Hagia Sophia in Thessaloniki was one of the largest and most important in the city. The current building lies over a monumental early basilica church seemingly destroyed by the earthquakes of 620. It has more or less been dated to the seventh century as a building, and its plan – a square building with a central dome – has resonances of Hagia Sophia in Istanbul.[123] The central space is surrounded on three sides by a sort of ambulatory which serves as side aisles and narthex. This gives it a very different feel to the church of St Demetrios: it is far more enclosed and contained.

Eighth-century mosaic survives in the bema vault (the mosaics in the apse and dome are both later and will be discussed in due course).[124] In the centre is a blue circular mandorla on a gold background; in the middle of this is a gold cross. White rays come off the arms of the cross to the edge of a rainbow border, and sixteen gold stars surround it (see below, Fig. 132).There are bands of decoration in the vault and the monograms of Eirene and Constantine. These are interpreted as referring to the Iconophile Empress Eirene and her son Constantine, who ruled together between 780 and 788. A Bishop Theophilos is also named in another monogram and he has been identified as the bishop present at the Second Council of Nikaea in 787, the Council called by Eirene to reinstate the veneration of religious images. The original decoration of the apse is also ascribed to Eirene and Constantine. Now the apse bears an image of the Mother of God and the Christ-Child but the faint outline of a cross is just visible behind them. As at Hagia Eirene, the cross arms curved downwards in order to look straight from floor level. The inscription in the apse originally accompanied the cross and is almost identical to that in Hagia Eirene.

Constantine and Eirene's aniconic mosaics are particularly interesting in light of the fact that it was they who, as fervent Iconophiles – Eirene at least – restored religious images to their place in church practices at the 787 Church Council of Nikaea. These mosaics post-date that Council and also echo the decoration of the Iconoclast church of Hagia Eirene in Constantinople, perhaps hinting at a close relationship between the two cities in this decision (though the choice of the Iconoclast church might perhaps be felt to be an odd one in the circumstances). The mosaics may have been installed at the time of Eirene's military triumph celebrated in Thessaloniki in 784. But neither of these reasons explains why the Iconophile imperial couple chose a cross rather than a figural represenatation, especially as, at much the same time, Eirene appears to have commissioned figural images in mosaic in Constantinople (at the Pege Church and the Chalke Gate). The choice of aniconic imagery in Thessaloniki intimates that the gap between Iconoclasts and Iconophiles was not a vast one: the cross was always a highly significant image for all Christians and not one that the Iconophiles would let the Iconoclasts appropriate. Its use here perhaps echoed Justinian's Hagia Sophia as much as Constantine V's Hagia Eirene.

I move now to consider mosaics in two towns that lay between the Byzantine Empire and the assorted powers in Italy and the West in the seventh and eighth centuries, Dyrrachium (Durrës in modern Albania) and Ravenna. Dyrrachium was an important Roman town, a provincial capital in the fourth century, and birthplace of Anastasios I, the fifth-century eastern emperor who rebuilt it significantly, especially in terms of its walls. Though it was besieged by Theoderic in 481, the city seems to have remained a part of the Eastern Empire throughout the Middle Ages, albeit a contested one. As an Adriatic port, Dyrrachium was of significant strategic importance and there is much discussion as to how far in the sixth to eighth centuries it looked to and was influenced by Rome or Byzantium.[125]

A single wall mosaic survives in a very small chapel built into the Roman amphitheatre.[126] It is a very puzzling image. A series of scenes survive on the rear and south walls. On the rear wall, a single figure, thought to be the Virgin rather than Christ, is flanked by two angels flanked in turn by two female figures, identified through an inscription as Eirene (Peace) and Sophia (Wisdom). The figure of a small female donor survives; there may have been another donor to the Virgin's right. On the south wall, one panel depicts St Stephen with golden hands, the other a



Figure 106 Mosaic panel on the south wall of the small chapel in the amphitheatre, Durrës, dated anywhere between the sixth and eleventh centuries. St Stephen is on the left; Mary, dressed as a queen or empress, is flanked by two archangels, and two smaller donors. The tesserae look much bigger than those used in other mosaics (reused from floor mosaics?) and there does not appear to be much glass.

female figure, dressed as an empress, holding an orb and staff or sceptre and interpreted as Mary as Queen, Maria Regina (Fig. 106). She is flanked, once more, by two angels and two donors. The inscription here records a prayer: 'Lord, preserve your servant Alexander.' Mary's halo is of gold glass, inserted at an angle and widely spaced; the background, however, is made from white, yellow and green tesserae, implying a lack of gold. Red and blue glass is also used. These mosaics show an awareness of imperial imagery in the Maria Regina image, which suggests the use of these allusions by the patrons for their own ends.[127] The theme of the images is that of intercession: the patrons (we assume) appealing to the Virgin, with the angels perhaps marking her heavenly court or perhaps acting as intermediaries (or both). The chapel may have been a burial space, in which case the Virgin may be receiving her suppliants in heaven.

The chapel itself is odd: the space appears damp and unprepossessing, but was clearly significant enough to warrant mosaic decoration. The iconography allows those who favour both Rome and Byzantium as influential in the area to make their case. This sort of imagery with this sort of message is a version of scenes in mosaic that we have seen from Poreč, from Rome (though Christ is the central figure here) and from Thessaloniki. The gold hands also suggest Thessaloniki: in the church of St Demetrios, the saint in one of the fifth-century fragmentary panels has golden hands. The Maria Regina may suggest Rome (similar images are known from S. Maria Maggiore in the fifth century (mosaic), a wall painting usually dated to the early sixth century in S. Maria Antiqua, and an icon in S. Maria in Trastevere dated between the sixth and eighth centuries) or Byzantium.[128] Technically, comparisons have also been made with the style of the seventh-century mosaics of Pope John VII in his oratory in St Peter's. Stone tesserae are used for the flesh, a feature which supposedly indicated a Byzantine workshop; the tilting of tesserae is also said to be a Byzantine feature.[129] But the tesserae of the south wall are

laid flat and tilted tesserae are found in Rome. The personifications of Sophia and Eirene are striking, in mosaic at least, though such personifications were freely used in other media and this is yet another example of the diversity of images found in mosaics. The use of Greek in the inscription might mean that the patrons belonged to the local Greek-speaking elite and had connections with Constantinople. The panels of the two walls may even have been made by different artists.[130]

It will come as no surprise after all this that the date of the panel is unknown. The stylistic elements and the similarities with the mosaics in St Demetrios in Thessaloniki suggest a sixth- or seventh-century date, supported perhaps by the links that can be drawn with Poreč and Rome.[131] The archaeology of the chapel and the interpretation of the relationship between the mosaics and the wall paintings that cover the south and rear walls and underlie the mosaics – the mosaics have been inserted over the paintings – to an extent suggest the possibility of a conservative programme that can be dated anywhere between the ninth and eleventh centuries.[132]

So, essentially, there is no means of dating this panel; nor can we really be sure what it is doing here. However, within the context of the bigger picture of mosaics, its existence at whatever date between the seventh and eleventh centuries should not be surprising; it is its survival that is fortuitous. Its iconography is not extraordinary, nor is its presumed local patronage. As with mosaics in St Demetrios and Hosios David, for example, this mosaic demonstrates the continuing use of the medium by those who were not emperors, bishops or popes. The use of mosaic in this unusual space surely served to mark the chapel out as particularly special. It may well be the sort of mosaic that we have seen in some quantity in a variety of sites in the Levant but from which only loose tesserae now remain. The lack of gold may indicate an issue over cost or access to resources. It may even be that it was made from tesserae surviving from earlier Roman mosaics in the city and that the mosaicist was limited by the available resources. Whether it matters if the artist came from Byzantium or Italy, whether 'Byzantine' or 'Italian' techniques were employed, the language of the scene, both iconography and medium, was one of a more universal Christian language, comprehensible to Christians from West or East, and stressing an underlying 'Romanness'.[133]

Ravenna too served as a bridge between the West and the Byzantine Empire. It remained a significant Byzantine city throughout the period of the Byzantine exarchate in Italy, 600–750, a time of almost unceasing military activity.[134] At the start of the seventh century, the Byzantines and the Lombards, who had entered the picture in 568 when they crossed into north Italy and established themselves in the north and centre, were involved in a struggle for Italy. As this was played out, Ravenna gained less and less attention, increasingly perceived as an outpost of empire rather than a central concern. Even when Emperor Constans II moved from Constantinople to the West in 663, it was Syracuse in Sicily, not Ravenna, that he chose as his base, and it was there that he was murdered in 668. Increasingly, the Byzantines became irrelevant in Italy; gradually the exarch found himself in conflict with the local aristocracy in the region and, progressively, Ravenna's relationship with Rome became central as pope and archbishop contended for regional supremacy. In 751, when the Lombards finally took Ravenna, Byzantine rule in north Italy came to an end, and Ravenna's importance ceased.

In this hostile context, it is unsurprising that the Byzantine exarchs invested little time or money in large-scale civic or church building in Ravenna, though small-scale construction and repair work continued. Little survives in mosaic beyond work in S. Apollinare in Classe: whether these mosaics were repairs, replacements or from

new is unknown. The triumphal arch seems to be a seventh-century composition (if it is not a twelfth-century remake) possibly reproducing the original design.[135] In the iconography of twelve sheep marching up from the heavenly cities of Jerusalem and Bethlehem towards a central bust roundel of Christ, and with the presence of mountainous, regular red and blue clouds and the evangelist symbols, similarities with sixth-century mosaics are apparent – SS. Cosmas and Damian in Rome and, nearer to home, elements in S. Vitale and the Eufrasian basilica at Poreč. Below the apse and the images of the four bishops of Ravenna installed by Maximian in the sixth century are two seventh-century panels on the outermost walls. The first echoes S. Vitale in showing an emperor and his court, the archbishop next to him, receiving a scroll labelled 'Privileges' from the emperor. To the viewer's left of the emperor, two further haloed figures (whose bodies have been entirely restored) may represent part of the imperial entourage (see above, Fig. 94). That the scene shows a gift to the church of Ravenna seems clear, but the actual event and actual figures remain less certain. The emperor may be Constantine IV and the bishop Reparatus (671–7); however, they may be Constans II and Bishop Maurus, with Reparatus' role that of the patron of the image.[136] In 666, Constans had granted Ravenna independence from the Roman Church and Reparatus had been very active in a number of political events: the scene may have been perceived as an amalgamation of all of these. As a mosaic, however, although it highlighted Ravenna as the capital of the Byzantine exarchate, it also emphasised the status of the church in Ravenna, and especially its bishop, granted privileges by the emperor himself, and perhaps looking to go one up on Rome once again. The second panel also makes reference to S. Vitale, in this instance to the south tympanum. It depicts Abel and Melchisedek sacrificing at an altar in the presence of Abraham and Isaac. In contrast to S. Vitale, the priest Melchisedek is the central figure, more than hinting at the bishop presiding at the altar located in front of these panels. Indeed, the apse at Classe throughout its programme succeeds in highlighting the importance of the bishop of Ravenna, for he performed the liturgy immediately below it and would almost certainly have stood at some point directly below Apollinaris, who himself stands below Christ.

In contrast to what was so clear in the Islamic mosaic programmes, the surviving mosaic images in Constantinople, Thessaloniki, Dyrrachium and Ravenna tell far less of a story of imperial power and authority. This is unsurprising: there are no survivals from the great imperial churches (most of which were presumably already decorated) other than Hagia Eirene (repair work) and there is little evidence to tell us whether and how much emperors built churches in this period. I am reluctant to make an automatic association between the travails in Byzantium and a drop-off in mosaic production (it is not a link that seemed valid in fifth-century Rome). Nevertheless, overall, the picture of mosaics in Byzantium in the seventh and eighth centuries, despite the losses that must have occurred, reinforces our understanding of this as a difficult period, one where the empire was pressed on various sides, land and resources were lost, Constantinople was besieged, and time, energy and resources for building works may have been in short supply and focused on other needs.

What these mosaics do reiterate is a continuity in the ways in which the medium was employed. The St Demetrios panels appear to have been a mixture of the commissions of private individuals and families (St George with his two children) and those put up by civic officials. The personal panels are perhaps more individualistic, as at Dyrrachium for example, where the choice of personifications and saints surely held

a meaning specific to the donor. In St Demetrios, these personal meanings may well have revolved around the nature of the church as a healing shrine and the saint as protector of the city and its people.[137] Indeed, in some ways, the mosaics show Demetrios moving from healer saint to saviour of his city. But these mosaics were not the defining images of the church: those were in the apse and on the triumphal arch. At Ravenna, we see what might be construed as a final playing-out of Byzantine power in the city and the region with the echoing of the mosaics of S. Vitale (the glory days of empire) and the presence of the emperor's image commending the city and its bishop. But in the triumphal arch, and the use of imagery also found in Rome, we might also see signs of Ravenna's continuous power struggle with the pope for ecclesiastical supremacy.

In contrast, in Constantinople and in the imperial mosaics in Hagia Sophia in Thessaloniki, we see an imperial agenda affected by religious concerns: Iconoclasm, the place of images in religious practice, and the question of appropriate imagery. Hagia Eirene reflects what an Iconoclast emperor felt to be acceptable. The Church of the Dormition, with its cross, echoes this; but in Hagia Sophia in Thessaloniki, we see an Iconophile emperor and empress responsible for the restoration of the icons in 787 also using the cross – a biding of time before using figural imagery or a demonstration of the significance of the symbol?

MOSAICS IN THE WEST – ROME

In contrast to Byzantium, considerably more new mosaics from this period survive in Rome than from anywhere else: in the seventh century, nine of the ten new mosaics in Italy are located in Rome, and in the eighth century all four new mosaics come from that city. Of course, this is in part a chance survival, but nevertheless the seventh and eighth centuries were difficult times in Rome too, and that mosaic production continued on this scale is suggestive.

Sixth-century Rome was a state in which gradually the popes were beginning to establish themselves as the most significant figures of authority in the city. It was a gradual process as popes and Romans alike sought to weave their way between the conflicting hostile forces of Byzantium and the Lombards, whilst holding on to their independence.[138] The period of between about 550 and the mid to late eighth century, the period after the death of Theoderic and the Gothic Wars, was a turbulent one, a time of clashes with Byzantium and Byzantine power in Italy, of religious disputes with the Byzantine patriarch, and of intermittent but ever-present conflict with 'barbarian' states in Italy, most notably with the Lombards. Until the 740s, the Lombards were more engaged with trying to remove the Byzantine exarchate from Ravenna than with papal territories. In the 740s, the papacy and the exarchate worked together, perceiving themselves as the last remains of the Roman Empire. But when papal pressure failed to remove the Lombards from the exarchate, Pope Stephen II (752–7) called in the Franks and their leader, Pippin, who finally defeated the Lombards in 773. It was also a period of Muslim raids along the Italian coasts and especially on Sicily.

The papacy was also in increasing disagreement with the emperor and patriarch in Constantinople over who had supremacy in religious matters. Several popes were summoned to the East to defend themselves. Popes began to date by the papal year and to distance themselves from the imperial administration. The onset of Iconoclasm in particular was fiercely rejected by popes, who used it as a chance to claim their own orthodoxy and supremacy over the whole Church. Locally, they struggled with bishops in Ravenna or with rivals in Rome as, internally,

members of the Roman aristocracy gradually recognised the powerful potential of the role of pope. So retrospectively, the seventh and eighth centuries can be understood as a period of transition for Rome away from Byzantium. From the late seventh century, a series of popes, acting in concert with the local Roman nobility, sought to free Rome and central Italy from the Byzantine Empire and to create their own state. As these popes became increasingly significant political figures in the city, they found themselves in a constant struggle to maintain and extend papal power and prestige, juggling and playing off a variety of opponents in this period, Byzantines, Lombards and Franks, all of whom perceived Rome as an eminently desirable acquisition. By the mid-eighth century, the popes, especially Hadrian I and Leo III, saw the Carolingians as their best bet for continued protection, and allied themselves with the Frankish kings in a variety of ways, culminating in the coronation of Charlemagne in Rome as Holy Roman Emperor on Christmas Day 800.[139]

In this context of negotiating a way through the challenging and shifting situations of the time, and as a way of asserting the continued primacy of Rome as the greatest Christian city, popes had to continue to build. Rome was always the least typical city in Italy, always by far the largest, wealthiest and, in the office of the pope, the biggest player in religious matters. This was the pull for Christian visitors, who came on pilgrimage or to deal with ecclesiastical officials.[140] The *Liber Pontificalis*, with its emphasis on buildings and gifts to churches, highlights something of how Rome developed as a Christian and papal city, displaying a papal rhetoric of construction, not just of religious buildings but of public, secular ones, often strategic – walls and aqueducts, for example, being of more immediate need than new churches. Mosaics, having been little mentioned by the *Liber Pontificalis* in the lives of fourth-, fifth- and sixth-century popes, start to be remarked on more regularly, perhaps as more noteworthy. It is no accident that so many surviving mosaics belong to papal churches that were also pilgrimage churches: as we shall see, mosaics were an intrinsic part of papal display, a public demonstration of faith and of asserting a variety of papal messages both to local inhabitants and to the mass of pilgrims.

It seems reasonable to see the production of mosaics continuing in an unbroken tradition from the sixth into the seventh century, as it had from the fifth into the sixth. Four seventh-century mosaics are still in situ in Rome: in S. Teodoro (*c.* 600); S. Agnese *fuori le mura* (*c.* 625–38); S. Stefano Rotondo (*c.* 642–9); and the S. Venantius chapel in the Lateran Baptistery (*c.* 642–9).[141] In addition, a detached mosaic panel of St Sebastian (*c.* 680) is now displayed in St Peter *in Vincoli*. In the eighth century, fragments of the Oratory of John VII in St Peter's (*c.* 705–7) survive, as does part of a programme in the church of SS. Silvester and Martin (S. Martino ai Monti). Leo III's mosaic work, from S. Susanna and SS. Nereo ed Achilleo to the Lateran *Triclinia*, straddles the eighth and ninth centuries. The *Liber Pontificalis* adds S. Euphemia and S. Pancrazio in the seventh century to this list, and, in addition to John VII, several popes commissioned mosaics for their building work in St Peter's and the Lateran. Although the surviving material suggests that popes were once again the dominant sponsors of churches and their fixtures and fittings, we can also detect a change in emphasis in some of these churches.

The last surviving Roman mosaic discussed was Pope Pelagius II's work at S. Lorenzo *fuori le mura* in the mid-sixth century. The next surviving mosaic is the apse mosaic in S. Teodoro, a small round church near the Forum. This mosaic has been massively and rather unpleasingly restored, mainly by Nicholas V (1447–1555), to the extent that we have no idea whether the original Christ

was bearded or beardless.[142] However, the basic iconography is similar to several mosaics we have already seen: at S. Vitale in Ravenna; at the Eufrasian basilica in Poreč; at SS. Cosmas and Damian in Rome. Christ, seated on an orb, is flanked by Peter and Paul who present two unnamed saints, presumably Theodore and perhaps Cleonicus, a martyr saint associated with Theodore. This is what might be called a 'standard' iconography: Christ; two introducers (Peter and Paul or angels); and the local/name saints. Some elements – the presence of a divine hand and of red and blue clouds – are even more reminiscent of motifs from SS. Cosmas and Damian, located just to the other side of the Forum, and from S. Lorenzo *fuori le mura*, and are themes continuously used in Roman mosaics throughout the Middle Ages. Although the patron of the S. Teodoro mosaic is unknown, and is not now shown in the mosaic, the church itself was one of the seven original deaconries in Rome and so it is possible that the mosaic was the result of papal patronage.

However, the pope after Pelagius II who can next be definitely associated with mosaic-making was Honorius I (625–38), responsible for work at S. Agnese and S. Pancrazio. In the sixth century, Pelagius had built a large basilica church over the tomb of the martyr Agnes, a church which is little more than a spit away from S. Costanza and located over a set of catacombs. Honorius restored this church and was responsible for its lavish decoration and apse mosaic. Against a background of different shades of gold, Agnes, in magnificent imperial-style robes and stunning jewellery, stands in the centre of the apse on a stylised ground line (Fig. 107). Tongues of fire and a sword at her feet indicate her martyrdom. She is flanked to her right by Pope Honorius himself, offering her a model of the church and, to her left, by an unnamed saint, sometimes identified as Gregory the Great, whom Honorius idolised, carrying a book. The Hand of God appears out of red clouds, surrounded by a circle of stars and holding a martyr's wreath. What is striking is the absence of Christ from the scene: this is the sort of image focused on the saint and her human suppliants/patrons visible at St Demetrios in Thessaloniki, but there such images were not central to the church.

Below the image is an inscription commemorating Honorius' work. He is described in the *Liber Pontificalis* as the son of a consul, and that means that his family was aristocratic and, presumably, that he had considerable personal resources. The mosaic and its surrounds make it clear that he was prepared to invest much of these in the church: he used a lot of *spolia*, pairing marble columns and capitals across the aisle, and the revetment of the apse includes Proconnesian marble and purple imperial porphyry, two of the most prestigious of marbles available. Although the *Liber Pontificalis* records Honorius as rebuilding and restoring at least nine other churches dedicated to various martyrs, it mentions mosaic only in the case of S. Agnese, though Honorius' S. Pancrazio, for one, is also known to have had a mosaic.[143] The remodelling of S. Agnese may well have been a part of a deliberate programme on the pope's part of renovating the memorial sites of martyrs. Certainly the scale and plan of the church would have accommodated crowds of pilgrims and allowed them to circulate within the building and through the crypt.[144]

Honorius' successor, Severinus, who was only pope for little over two months in 640, is recorded by the *Liber Pontificalis* as having 'renewed' the mosaic in the apse of St Peter's, as it had been destroyed. The focus of his life in the *Liber Pontificalis* is an account of how, in the hiatus between the death of Honorius and the accession of Severinus, the commander of the Byzantine army in Italy and the Byzantine exarch of Italy took advantage of the break in authority and plundered the vast treasure stored



Figure 107 Apse mosaic, S. Agnese, Rome, seventh century. The Hand of God offers a martyr's wreath to Agnes who stands amid the flames of her sacrifice, flanked by the patron, Pope Honorius I, and an unnamed saint.

in the pope's residence in the Lateran.[145] We might take three things from this: the tensions and hostilities between the Byzantines and Romans; the extent of papal resources in the period (no wonder Honorius could do so much building!); and the fact that enough resources remained for popes to continue building and repairing afterwards. We might also wonder where all that papal wealth came from, given the vicissitudes that had affected Rome: however accurate an account it is, it certainly implies a level of papal resources which is supported by the *Liber Pontificalis*' accounts of sustained and continuous papal donations to different churches.

The loss of the Lateran Treasury did not seem to impede Pope John IV (640–2) and Pope Theodore I (642–9) in their work. John, from Dalmatia (the Roman province along the seaboard of modern Croatia), built the Chapel of S. Venantius inside the Lateran Baptistery to house the relics of a group of slightly obscure saints, including Venantius, Domnius, Maurus and Anastasius, whose relics he had saved from Dalmatia – their memorials in Salona were under threat from Slav invasions – and brought to Rome. This church was therefore a martyrium, a shrine made specifically for the veneration of relics, as was S. Agnese. The mosaics occupy the apse and the apse arch, though a later horrid baldacchino does a very good job of obscuring them (Fig. 108). In the centre of the apse, a huge, dominating bust of Christ, set amid red and blue fluffy clouds, blesses the congregation. The bust



Figure 108 View of the Chapel of S. Venantius, Lateran Baptistery, Rome, seventh century. The massive baldacchino successfully obscures the apse mosaic, but Christ and his flanking angels are visible. To either side of the apse are the Dalmatian martyrs; above them, the heavenly cities, Bethlehem and Jerusalem, and the Beasts/evangelist symbols.

is flanked by two half-figures of angels. Below, a row of standing saints (Peter, Paul, John the Baptist and John the Evangelist, Venantius and Domnius, and the two popes, John and Theodore) is arrayed either side of an orant Mother of God in the centre. On the arch are more saints (the Dalmatian martyrs themselves), the heavenly cities, Jerusalem and Bethlehem, and, right at the top, the symbols of the four Beasts of the Apocalypse/evangelists.[146] It is a very full set of mosaics. Both theophanic elements (Christ and clouds, Jerusalem and Bethlehem, Beasts/evangelists) and aspects relating specifically to the Dalmatian saints are included in the programme. The Mother of God is there, and the donor-popes. It is reminiscent of other Roman apse mosaics, SS. Cosmas and Damian and S. Lorenzo, for example, with the same details rearranged to particular effect (the bust Christ moved from the centre of the arch into the apse, the saints put below him). There are some rather deft individual touches such as the haloes of Christ and the angels, which are deliberately constructed to appear made from solid light, for they block out part of the background and the clouds (Fig. 109). Here, in the Lateran complex, the key church for the bishop of Rome, the pope maintained the



Figure 109 Detail of the apse mosaic, showing the clouds changing colour as they enter the haloes of Christ and the angels. Pope John IV, the patron, and St Venantius are just visible to the left. The Chapel of S. Venantius, Lateran Baptistery, Rome, seventh century.

tradition of housing the relics of martyrs, but a very personal element is apparent, both in the origin of the saints and in the choice of patron, Venantius, after whom Pope John's father was named.

Pope Theodore, who finished S. Venantius, was responsible himself for further work at the fifth-century church of S. Stefano Rotondo. This was never a parish church; rather, it was a memorial church, a station church, just round the corner from the Lateran, without its own clergy, reliant on papal and imperial support. It was (and is) also a church designed for large crowds. Like S. Maria Maggiore, it stood out in a neighbourhood where other public buildings were falling into ruin. Theodore moved the relics of SS. Primus and Felicianus into the church from their catacomb, both to preserve them from the decay outside the city walls and, perhaps more importantly, to bring their intercession into the city.[147] He had the front wall of the transept arm demolished and replaced by an apse, forming a sort of side chapel to house the relics, and also the body of his father. The mosaic of the apse has been damaged and restored but the iconography is clear (Fig. 110). In the centre of the mosaic is an enormous gem-studded cross with a bust of Christ (unattractively reconditioned) above it. The two martyrs, Primus and Felicianus, stand to the viewer's left and right respectively, either side of the cross. They wear formal robes with *tablia*, hold scrolls (these may be repairs), and stand on a green ground sprinkled with flowers, perhaps symbolising paradise. The Hand of God may be descending through a roundel of white stars on a black background, but this is hard to see.

The iconography is yet another rearrangement of already existing themes. The name



Figure 110 Mosaic in the chapel of SS. Primus and Felicianus, S. Stefano Rotondo, Rome, seventh century. The bust of Christ above the cross is only one area of much restoration.

saints this time stand either side of a jewelled cross, perhaps a little like the way in which S. Apollinaris is shown in his church in Classe, though he is positioned below the cross and the overall scene is more complex. A great jewelled cross was also a feature of the mosaic of S. Pudenziana and may well have featured in other Roman mosaics. Although it has been said to resemble Iconoclast images of the cross, it is at least a good fifty years too early for any such comparisons to be made. Rather, there may have been something of a personal element for Theodore that can be detected in his choice of imagery. Theodore's father, buried in the chapel, had been a bishop from Jerusalem, and the cross of the mosaic may have evoked the great gemmed cross given by Constantine to the Church of the Holy Sepulchre in Jerusalem and the large jewelled cross placed by the Byzantine emperor Theodosios II in *c.* 420 on the spot where Christ died.[148] There may also have been resonances with the capture of the True Cross by the Persians in 614 and its recapture by the Emperor Heraklios in 628. To continue these associations, St Stephen himself had been the first martyr and had met his end in Jerusalem.

Theodore's patronage is one of the earliest attested relocations of relics from the suburbs into the city itself. Like S. Agnese and S. Venantius, it seems to indicate an increased awareness of relics and their potential, a concern to make them more accessible, bringing them into the city from threatened areas, be those Dalmatia or Rome's own suburbs, and so a part of the increasing veneration of the martyrs of the

city. It can also be understood in the context of an increase in pilgrim traffic apparent from the mid-seventh century, associated with the loss of the Holy Land to Christians.[149] This theme of saintly relics and pilgrimage was one developed further by ninth-century popes.

One final presumed seventh-century mosaic in Rome retains this theme of association with the martyrs. In the church of S. Pietro *in Vincoli*, itself a very important Late Antique church, a detached mosaic panel of St Sebastian is displayed halfway down the church. Sebastian is shown as a half-sized figure, carrying a martyrs' crown and wearing elegant blue-grey military robes, ornamented and bordered in gold (Fig. 111). He stands in a green and flowery plain, against a blue background. The panel is not in its original setting, and we have no idea of where it originally came from. Its scale and the nature of its decorative border suggest that it did not form part of an apse mosaic.[150] It may have been on an arch wall; it is conceivable that the panel was on a pier or some other flat surface, like those in St Demetrios in Thessaloniki. It may even have been a votive panel like those of St Demetrios; the image has been associated with a special veneration of Sebastian, after an epidemic of the plague in 680 was ended by a procession carrying his relics.[151] The Church of S. Sebastiano, built over the Catacomb of St Sebastian outside the city walls, was one of the major pilgrimage churches of Rome: the saint's relics were housed there until their transfer to St Peter's in 826, which may offer an alternative scenario and date.[152]



Figure 111 Detached panel depicting St Sebastian, labelled in Latin: original location unknown; now in S. Pietro *in Vincoli*, Rome, seventh century.

The individualistic agenda of papal patronage seems particularly apparent in these interests in specific martyrs and, unlike the great basilica churches of the fourth and fifth centuries (also built and decorated to a personal agenda), these martyria, especially when added as smaller chapels to already existing structures, can appear as almost 'lesser' and more personal projects. This is misleading: the personal was always political, especially in matters of faith. The surviving mosaics, despite any personal touches, all belong to major large churches. These churches fit a pattern apparent in the *Liber Pontificalis* of papal founding and refounding of churches celebrating the Christian martyrs of early Christian history, an assertion of papal and Roman Christian importance. They display an emphasis on saintly relics that had been present, in one form or another, even in the early days of Christianity, but they show those relics being brought into the city, both from the provinces and from the suburbs, for safekeeping and also, one would imagine, to increase pilgrim traffic. It is no accident that, in their different ways

S. Agnese, S. Venantius in the Lateran and S. Stefano could have served as foci for pilgrim devotions.

Despite the raiding of the Lateran Treasury in the middle of the century, popes clearly still commanded enough resources to muster the logistics and cash necessary for mosaic-making, and indeed for donations more widely. Between Theodore in the mid-seventh century and John VII at the start of the eighth, there is a gap in our knowledge of Roman mosaics; none survives (except perhaps the Sebastian panel) or was noted by later antiquaries, and none is recorded in the *Liber Pontificalis*. There is also a pause in the *Liber Pontificalis*' reporting of gifts and donations to churches between Theodore (d. 649) and Adeodatus II in the 670s. Theodore's successor, Martin I (649–53), had a particularly tough time with the Byzantine emperor, Constans II, who later visited Rome in 663, meeting Pope Vitalian (657–72), and made gifts to St Peter's, removing a great deal of bronze work from the city, including the roof of the Pantheon, while he was at it. But Adeodatus (672–6) and his successors are regularly recorded as making donations to churches. Sergius I (687–701), who stood up to Justinian II, is noted as a major renovator and donor who restored the mosaics on the façade of St Peter.[153] But the next surviving mosaics are those fragments that remain of the Oratory of John VII, built on the north-east corner of St Peter's by that pope.

St Peter's, as befitted the imperial shrine of Peter, was an almost constant beneficiary of his successors, along with the papal cathedral of the Lateran. John (705–7) was neither the first nor the last to add to the Constantinian complex: Gregory III (731–41) added to the building, and a drawing of the façade of S. Maria *in Turris* (the gatehouse of St Peter's) has an inscription attributing its mosaic to Paul I (757–67).[154] However, it was only from John's oratory that actual material survived the catastrophic rebuilding of the church in the sixteenth century.[155] There has been a lot of debate as to what the Oratory originally looked like. In terms of its mosaics, there appear to have been fourteen compartments over the door, some subdivided. At the top, there was a larger-scale mosaic of the Virgin with Pope John; there were various scenes from the life of Christ (part of the Nativity and the Magi survive – see Fig. 43), though also with a Marian theme, and from the lives of Peter and Paul (though these may be part of a twelfth-century programme), which will always have held papal resonances.[156] The Oratory and its mosaics seem to fit into the context of the narrative cycles of the Early Christian basilicas of Rome, surviving at S. Maria Maggiore and known to have existed at St Peter's and S. Paolo *fuori le mura*, but they also expressed an individual's devotion to Mary, with John representing himself in the images as her humble servant.[157] In part, understanding the meanings of the programme depends on our understanding of the function of the chapel itself, whether we think it was a private space for the pope or if it had a public function. But whatever the case, John's use of mosaic and of imagery here does not significantly depart from other uses we have seen of popes using pictures (and mosaic) for self-propaganda and promotion (Felix in SS. Cosmas and Damian, Honorius in S. Agnese for example).

Not to be overlooked, the Lateran also received papal updating. John VII had left the Lateran to base himself on the Palatine and its former imperial palaces. Gregory II had added a chapel to St Peter (plus mosaics) to the Lateran Palace but Pope Zacharias (741–52) was responsible for considerable repairs. Zacharias built a triclinium (a formal reception and banqueting hall) which he adorned with marble, precious metals and mosaic, as well as other buildings including an oratory and a portico. This went a long way towards reasserting the political status

of the Lateran.[158] The great basilica of S. Maria Maggiore and its mosaics appear to have undergone some renovations and the one-time presence of the monogram of Hadrian I in the apse of S. Pudenziana also suggests restoration work there.[159]

It is too easy to think of Rome as always a Christian and a papal city after Constantine. Rather, it was in a process of gradual change and, arguably, it was between the seventh and ninth centuries that the popes turned Rome into their city.[160] Church building and even mosaic-making played a part in this. Churches moved gradually into the heart of the city. Constantine's great basilicas were on the edge; S. Maria Maggiore on the Esquiline Hill in the fifth century was the first great papal building project; Pope Felix built a church into the Forum in the sixth. By the seventh and eighth centuries, there were large numbers of papal building projects throughout the city. Whilst the great basilicas and venerated old (Early Christian) churches such as S. Maria Maggiore and S. Pudenziana were maintained and renewed, there was also the construction and support of churches that were not always vast ceremonial buildings but that related instead to saints and their relics, to pilgrimage, perhaps to building a ring of sanctity within the city in these troubled times. It is striking how many of the mosaic projects from this period relate to the creation of martyr churches or chapels within already existing churches, projects given very personal slants in many cases, or to projects rebuilding and glorifying the two key papal bases, the Lateran and its complex and St Peter's. These were perhaps a sign of an increasing constriction inwards from outside the walls, perhaps a need for greater support from the saints, perhaps also a statement of papal power and religious authority, able to move the saints and call on them for their own ends. More and more as well, popes seem to put themselves in the picture in one form or another, not just in mosaics but also in other media – wall paintings (John VII at S. Maria Antiqua, as were Paul I and Hadrian I), and altar cloths (Gregory IV in an altar cloth given to S. Maria in Trastevere, Leo IV in a similar cloth at St Peter's) for example – asserting their standing and holiness.[161]

MOSAICS, 'GREEK' POPES AND ROME

However, mosaics have been enlisted in an argument that sees them as part of the evidence supporting the existence of 'Byzantine' or 'Greek' popes in seventh- and eighth-century Rome, popes who favoured Byzantium, acknowledged imperial authority and were even servants of the emperor.[162] The concept seems to spring from apparently changing papal demographics. Between 432 and 678, thirty-three of thirty-five popes were natives of Rome and its neighbourhood, brought up in the Roman Church's clerical and administrative tradition and even in some cases serving as the representative of the Western patriarch at the imperial court.[163] In contrast, twelve of the nineteen popes between 642 and 752 have been identified as 'Sicilian', 'Greek' or 'Syrian'. Of the four popes connected with mosaics, Honorius came from a Roman senatorial family in Campania, but John IV was the son of a *scholasticus* – a scholar or perhaps a teacher – from Dalmatia, whilst Theodore, son of a bishop from Jerusalem, and John VII, son of the imperial *cura palatii urbis Romae*, Keeper of the Palace of Rome, a Byzantine official, albeit one in Rome, were both described by the *Liber Pontificalis* as 'natione Graecus'. This sort of terminology has led to claims that consequently the papacy was Byzantine or perhaps Byzantinised, and further that this helped to support Byzantine rule in Italy.

Much depends on what the *Liber Pontificalis* meant by the phrase 'natione Graecus'. 'Natione'

does not really mean 'born in'; it might mean 'nationality' or possibly 'ethnicity'; it might imply that these men came from groups in Rome who had arrived from Greece or Syria as refugees or immigrants. Often, indeed, in Rome the 'Byzantines' were known as 'Easterners' rather than 'Greeks'.[164] Little suggests that these 'Greek' or even 'Sicilian' or 'Syrian' popes were brought up in the Byzantine Empire or the Eastern Church or that they identified themselves as 'Byzantine' ahead of 'Roman'. It seems likely that most if not all were born in Italy or Sicily and served, often for many years, in the Roman Church before becoming pope. And 'Greek' or not, by and large these popes stood up for themselves and their position against Byzantine encroachments whenever they could. Quite how much power and authority the Byzantines really had in Italy is unclear, but they were routinely in conflict with popes, clergy and people, suggesting that matters were never easy. Byzantine emperors tried on several occasions to impose their demands and were impeded or prevented time and again by the Romans and Ravennates – on one occasion, the emperor's envoy, the 'ferocious' *spatharios* Zacharias, had to be sheltered from the mob under the pope's own bed! When the Byzantines did come to Rome, it tended to be to plunder the city, as with the sacking of the Lateran or the visit of Constans II. Rather than necessarily pro-Byzantine, these 'Greek' popes were chosen by the Roman people and were increasingly representative leaders of the local society.[165] In fact, four of the popes particularly noted for standing against Byzantine authority came from a 'Greek' background. Theodore, for one, exacerbated tensions between Rome and Constantinople to such an extent that he precluded any dogmatic compromises and he may have backed a North African usurper over Emperor Constans II – Theodore's successor, Martin, suffered for this and died in exile.

Of all of them, John VII in particular has been identified as a 'Greek' pope who supported Byzantium, and his artistic patronage, especially his use of mosaics, has been understood in these terms. Not only was he 'Greek', he also employed 'Greek' mosaicists, and some elaborate art historical arguments have been advanced to make this case. Per Jonas Nordhagen argued that there were two basic styles of mosaic in Rome in the seventh to ninth centuries: that of S. Agnese and S. Stefano Rotondo, where the design was boldly and simply drawn, stone was used in areas of flesh, and figures appeared more two-dimensional and flatter ('Byzantine'); and that found in S. Venanzio and the St Sebastian panel, where figures were more modelled and rounded and glass was used for flesh areas ('Roman'). The Oratory mosaics are different from both. Characteristically, there is a considerable difference in the size of the tesserae used for flesh areas and for other areas; large tesserae are also used for contours and modelling lines. The tesserae are laid very deep in the render, with big gaps between them and a clear use of the setting bed as a part of the design. But the use of stone in the faces of figures is, according to Nordhagen, a clear sign that the mosaicists were nonetheless Byzantines.[166] It has also been said that the mosaicists at S. Agnese worked in a stiff, hieratic, even 'medieval' (local) style (implying 'non-Byzantine') in contrast to SS. Cosmas and Damian before or to S. Venantius after, where the mosaics are described as less austere, and that the S. Agnese apse betrays a 'provincial' (also, presumably 'non-Byzantine') use of glass and stone, since the two are kept apart and differ in size and scale, in contrast this time to S. Stefano, where they are mixed skilfully.[167]

This does not seem conclusive of anything. Whilst it is the case that both stone and glass are used in different ways, quite what can and should be deduced from it is unclear (witness the differing views on S. Agnese and S. Stefano),

especially as there are few mosaics from the Byzantine Empire itself to draw comparisons with. Leaving aside the subjective nature of the stylistic arguments (the association between 'stiff and hieratic' and 'local/provincial' rather than 'Byzantine') in technical terms, they effectively create three mosaic workshops in Rome in the seventh and eighth centuries, two of which, S. Agnese/S. Stefano (where the mosaics have also been characterised as the most stylised, austere and provincial) and the Oratory, were Byzantine; and one, producing 'better' ('non-medieval') modelling was local. This rather reverses the usual belief in imported high-quality Byzantine artists. Now, whilst the existence of three such workshops in Rome is not impossible to contemplate, any automatic association with Byzantium seems unnecessary: it should be clear by now that mosaic was as much a Roman medium as a Byzantine one. If John did look to Byzantium, and a rationale for this needs to be proposed, it was not certain that this was because there were no mosaic artists in Rome. Indeed, evidence from the Crypta Balbi suggests that Rome may even have produced its own tesserae in this period.[168] Technically, even if one accepts that stone faces do invariably equate to 'Byzantine' artists and glass to 'Roman' ones, and on these points the evidence for that from the sixth- and seventh-century Byzantine Empire is inconclusive, there is nonetheless enough evidence of the use of glass in these mosaics to show that 'Byzantine' and 'Roman' artists worked alongside each other. My point is not that there were no points of contact, artistic or otherwise, between Rome and Constantinople, or to deny the importance of Greek culture in the city – the interest in Greek books and Byzantine silks suggests differently, and Rome was clearly a point of contact between Greek and Latin culture and an important site for the transmission of ideas.[169] But Roman art was not Byzantine art and Roman popes were not Byzantines.

Papal focus was on Rome and its survival. Many of the most immediate threats to the city came from barbarian rulers, especially the Lombards, casting covetous eyes on Rome, still a symbol of empire: Byzantine help might perhaps be sought here. But by the late seventh century, Rome regularly asserted itself against Constantinople in church politics and took an increasingly large role in politics in Italy. At times, this might have led to support for and co-operation with Byzantium, but there does not seem much evidence for an organised 'Byzantine' party putting Byzantine interests ahead of Roman interests. In the mid-eighth century, the 'Greek' pope Zacharias was primarily engaged in keeping the Lombards at bay and bringing the Ravennate church back into his fold.

Papal interest lay in the physical and spiritual welfare of the pope's own city, Rome. Popes sought to maintain their own position, and religious art, depicting the support of God and underlining the status of the city and its pontiff to insiders and outsiders, played a central part in their endeavours to demonstrate the primacy of the church of St Peter to both, West and East. Almost every pope whose *Life* is recorded by the *Liber Pontificalis* was, if not a builder himself, at least a patron of religious buildings in Rome, sometimes more widely, and many worked hard to maintain the urban infrastructure of the city. As part of this, mosaics in Rome can be seen as specifically Roman, created in the city for specific purposes connected to religious, political and social lives in that city. It was the pope as bishop of Rome who was portrayed in mosaics, and the city and people of Rome to whom those images were directed. It is no wonder that many of the surviving mosaics look back to and evoke Rome's own past: the gemmed cross, the red and blue clouds, the basic layout of the images. References to the world outside were primarily to what was going on in surrounding Italy, and only secondarily and perhaps even tangentially to Byzantium.

From what survives in mosaics, it is apparent that Honorius, Theodore and John IV all favoured local saints, from the city and its environs or just across the Adriatic. Equally, John VII's Oratory had little specifically 'Byzantine' rather than Christian about its iconography, and many of its features derived from Roman traditions – the presence of Peter and Paul, for example, used time and again by popes to ram home messages about Peter's heirs. In using images of the Mother of God, John VII connected himself and Rome with Mary, and even this could even be construed as a challenge to Constantinople, which the Byzantines portrayed as Mary's city. Other images commissioned by John VII can also be read as proclamations of Roman supremacy: in S. Maria Antiqua were pictures of Martin I, maltreated and exiled by the Byzantines, and of Leo I, who wrote extensively about papal primacy; images of the six Church Councils were placed in St Peter's, surely a riposte to the removal of such depictions in Constantinople. These were surely not the sorts of pictures usually commissioned by imperial supporters.

ROME AND BYZANTIUM AND ISLAM

Taken together, this seventh- and eighth-century material from across the Mediterranean world suggests that patrons still felt it was worth going to the trouble of making mosaics. But this was in what we can now see as a time of changing worlds, of fragmentation. The once unified Mediterranean world of the Roman Empire of the fourth, fifth and even sixth centuries was becoming more clearly three areas: the Byzantine Empire; the Arab-Islamic states; and the diverse Western domains. In this chapter, I have roamed across the whole of the Mediterranean and seen how mosaic was used by Byzantine emperors, Islamic caliphs and Roman popes alike. Each employed the medium of mosaic in a similar way, in large, public and usually religious buildings, to make similar points, about standing, about piety, about religious and cultural supremacy. All three seem to have perceived mosaic (along with other materials, notably marble) as a medium evoking past Christian and Roman heritage alongside present prestige and supremacy. But there were differences. In Rome, mosaic was a medium of the Early Christian past of the city, used in the great early churches; it was also a medium of the Romans' own Roman past. For the Byzantines, mosaic was a symbol of the Christian past too but additionally of the Roman present, for they were, in their own estimation, the heirs of Rome. For the Islamic caliphs, however, mosaic was both a Christian and a Byzantine medium to be appropriated and transformed to the greater glory of the new faith, to allow it to outrank and replace its challengers, both in religion and in power.

Chapter 9

MEDIUM AND MESSAGE: MOSAICS IN THE NINTH AND TENTH CENTURIES

Mosaics in the ninth and tenth centuries will keep attention focused on the three worlds, Christian Roman, Christian Byzantine and Islamic Arab, of the previous chapter. But I begin in the West with a site located at some distance from Rome, but surely influenced by Rome, that of Germigny-des-Prés, near Orléans in modern France, a key bishopric in the eighth- and ninth-century Frankish kingdom of Charlemagne. It is an unexpected mosaic: who commissioned it and what is a mosaic doing so far north, deep in the heart of the Carolingian kingdom? The first question is straightforward enough: the patron of the mosaic was the Frankish bishop of Orléans, Theodulf.[1] The second is more complicated, taking in aspects of the relationship between Rome and the Carolingians that underpins much of the political events of the period.

GERMIGNY-DES-PRÉS AND ROME

The mosaic at Germigny-des-Prés is a small image in the apse of Theodulf's personal oratory, itself a small chapel (Fig. 112). At its centre, the mosaic depicts a rectangular box with two poles running its length. Two small angels hover over the top of the chest, gesturing downwards; above them, two more, much larger angels motion towards it. A hand emerges between the heads of the two larger angels, displaying the stigmata, a wound from the nails at the Crucufixion, suggestive of the risen Christ. An inscription around the bottom, whilst invoking the viewer's prayers for Theodulf in a very traditional fashion, gives some clues as to how the image could be understood: 'As you gaze upon the holy *propitiatorium* [inner sanctuary/mercy seat] and cherubim, beholder/And



Figure 112 Apse mosaic, Germigny-des-Prés, Orléans, ninth century. Four cherubim hover over a box representing the Ark of the Covenant and gesture, though whether to it or the altar below is unclear. The hand between the heads of the two larger angels bears the stigma. Theodulf's inscription is gold on blue.

see the shimmering of the Ark of God's covenant/Perceiving these things, and prepared to beset the Thunderer with prayers/Add, I beg you, Theodulf's name to your invocations.' This made it clear, to those who could read, that the odd-looking box should be recognised as the Ark of the Covenant described in Exodus; the four angels are the cherubim, surrounding and guarding it. But exactly what the cherubim are doing, whether gesturing towards Ark or altar, has been hotly debated, most notably because it is not clear whether the Ark was originally shown empty or not.[2]

The design of the image is unique among surviving mosaics. That, coupled with its unusual location in a private chapel in northern France, highlights the very personal nature of the mosaic, a conscious set of choices made by Bishop Theodulf himself. The bishop was a significant intellectual and religious figure at Charlemagne's court, a key advisor to the king. Between 791 and 793, he wrote the *Opus Caroli regis contra synodum*, or the *Libri Carolini* as they are better known, a Carolingian response to Byzantine Iconoclasm and to the 787 Iconophile Council at Nikaea which restored the place of images in

religious worship.[3] Theodulf's services to Charlemagne were rewarded with the bishopric of Orléans and the abbacy of Fleury, probably in 797 or 798. On becoming abbot, he converted the nearby villa at Germaniacus into his country residence, complete with oratory, though the mosaic is believed to have been commissioned after his return from Rome in 801.[4]

This visit marked the culmination of Frankish involvement in Italy. The eighth century had begun with papal manoeuvrings around the Lombards and Byzantines in Italy; it ended with the recruitment of the Franks to the pope's cause. Pope Paul I's death in 767 had terminated a period of relative calm. The papal elections of the next few years turned into a series of struggles between aristocratic secular and ecclesiastical Roman factions set within a larger framework of Frankish incursions into Italy and the ensuing conflicts. The election in 778 of Hadrian I from a noble family had calmed things but there were still tensions, and both Leo III (795–816) and in the next century Paschal I faced attacks from among the nobility of Rome. In 799, Leo had been attacked and imprisoned by his Roman rivals; escaping, he had taken refuge with envoys of Charlemagne in the city and then fled to the Frankish court at Paderborn. In October 799, Charlemagne had returned the pope to Rome with a Frankish escort, and then the king himself, with an army and several of his significant counsellors, including Theodulf, had visited Rome to preside over a synod. Immediately after the end of this synod, on Christmas Day 800, Pope Leo had crowned Charlemagne Holy Roman Emperor. Theodulf had been an advocate for the pope, who gave him the personal title of archbishop, and he spent about two months in Rome. This gave him ample opportunity to explore the city – and its churches – and it is surely no fluke that elements of his mosaic at Germigny evoke mosaics in Rome, for example S. Maria Maggiore (the Ark of the Covenant) and SS. Cosmas and Damian (the angels).

Scholarly understanding of the iconography of the mosaic derives mainly from how Theodulf's theology and his attitude towards religious imagery as revealed by the *Libri Carolini* are interpreted. It is an explanation that owes much to the Frankish version of Byzantine Iconoclasm and the debates about the validity and veracity of religious images. Working from a poor Latin translation of the *Acts* of the 787 Iconophile Council of Nikaea, Theodulf got hold of the wrong end of the stick and criticised it for supporting the adoration of religious art: the Council had actually condemned such adoration, making it clear that religious images could be venerated but not worshipped. Politically, in taking this position, the Franks also therefore – and seemingly by accident – set themselves up in opposition to the pope, Hadrian I, who had endorsed the Council. Consequently, it seems that the *Libri Carolini* was quietly shunted off into the royal archives. But if the *Libri Carolini* actually did reflect Theodulf's views on religious imagery, then presumably the mosaic also shared that position, despite the *Libri*'s, and so Theodulf's, stated opposition to religious images on church walls.

It is this paradox that has dominated interpretations of the mosaic image, leading to the message of the mosaic being perceived as highly symbolic. The overall meaning has been interpreted as the reality of the New Testament (Christ, manifest below the mosaic on the actual altar, in the form of the bread and wine of the Eucharistic sacrifice) replacing the symbolism of the Old, shown as the image of the empty Ark of the Old Covenant. In this reading, the Ark, despite its centrality in the mosaic, actually appeared as an obsolete relic, superseded by the presence of Christ on the altar below. Small details are understood as carrying enormous

weight, though whether such apparent minutiae were visible to those using the Oratory is another story. The cross which is depicted in the halo of the large angel to the viewer's right of the mosaic, but absent in the halo of the one to the left, may be significant of the difference between the Christians and the Jews, for example. It is felt to be in line with the *Libri Carolini*'s views on religious images as a bad thing that neither Christ nor the Virgin were depicted. Instead, their presence has been identified through symbols: the Ark itself was a frequent reference point in the *Libri*, where it was justified as an object commissioned by God; it was also often interpreted as a reference to Mary.[5] Theodulf's own poetry has been used to explain the significance of the wound in the Hand of God. So this mosaic has been given a very particular interpretation, one reflecting very directly the theological concerns of the patron in his own private space, a reading in its individuality like that of Hosios David, though without the same overt votive element. The meaning suggested above would have had almost no resonances for a Byzantine audience, and perhaps not a great many for a Roman one or even a general non-theological Frankish one. In an earlier chapter, I quoted critically Kurt Weitzmann's belief that 'when one deals with images . . . one has to realise that the artist was advised by a learned cleric who tried to make a composition in an apse, the focal point of the church, as meaningful as possible', on the basis that so many mosaic images were big public images seen by a large number of people that such subtle theological readings and hands-on involvements are less likely to be the only or even the primary message (though this is not to say that clever theology could not and cannot be seen in every mosaic). But Germigny-des-Prés fits the Weitzmann model, an image commissioned by a learned cleric, Theodulf, one full of complex theological readings.

But why in mosaic, which was not a medium very common in the Frankish world? Theodulf must have selected the medium ahead of paint, which might have been expected. Having seen mosaic in Rome, he may well have been fired with a spirit of emulation, perhaps of its splendours, perhaps because of its Early Christian connotations or its papal associations, or perhaps, simply, because mosaic was Roman. Other than at Germigny-des-Prés, mosaic seems only to have been used by Frankish kings, and specifically Charlemagne himself, who employed it at Aachen, built between 790 and 800, both in the palace itself and in his royal chapel, though little of this mosaic work survives.[6] Window glass and possibly mosaics were also used at the royal palace at Paderborn.[7] Why Charlemagne chose mosaic is also uncertain. Although the inspiration for the Aachen palace chapel and its mosaics is sometimes said to have been the octagonal Golden Triclinium of Justin II in Constantinople, there is no hard evidence to support this beyond a vague belief that anything in mosaic must have been influenced by Byzantium. It seems far more likely that Charlemagne was influenced by what he knew from first hand at Trier, if the fourth-century mosaics survived there, and in Italy at Rome and Ravenna.[8] That Charlemagne, and Theodulf after him, saw fit to appropriate mosaic seems a reflection of the significance of the medium as one proper for emperors and archbishops, something both men would have seen in post-Roman Italy and in Rome itself, a city that Charlemagne knew, and one in which he himself was portrayed in mosaic in the Triclinium of Pope Leo III. The continuing Roman tradition of mosaic at the highest level and its association both with papal authority and with the Christian past of the Roman Empire surely resonated with the Franks; furthermore, they may well also have appreciated the effect of mosaic as a bright, light-reflecting medium. From the same century,

fragments of ninth-century mosaics survive from the church of S. Ambrogio in Milan, perhaps from the renovations of Archbishop Angilbert II, an advisor of Charlemagne's grandson, Lothar I, king of Italy, perhaps for very similar reasons.[9]

It is also worth considering where the supplies and artists for these Frankish mosaics came from. There is a persistent belief that the mosaicists for Aachen, and indeed for Germigny, were Byzantine (simply because all mosaics come from the empire), but Italy and plausibly Rome seems a more likely answer. Charlemagne had closer links with Rome and the pope than with Byzantium, and mosaic-making was as much a Roman industry as a Byzantine.[10] Some, if not all, of the materials for Charlemagne's regal buildings actually came from Ravenna, since a letter from Pope Hadrian I survives, dated to 786/7, authorising Charlemagne to take building materials, including mosaics, for Aachen from Theoderic's Palace in Ravenna.[11] Another later source suggests that material also came from Trier.[12] A passage in Notker's *Life of Charlemagne* says that materials from Ravenna meant for Aachen were stolen by a royal official, who was discovered and punished with death by God. Although this official has been identified as Theodulf, this is highly improbable, since Theodulf did not fall from Charlemagne's favour, but from that of his son, Louis, and for apparent treachery, not theft.[13] However, it is conceivable that, like Charlemagne's, Theodulf's materials were derived from Ravenna (or were even left over from Aachen).

There is considerable debate about whether the Carolingians could have manufactured glass themselves. In the West, between the seventh and tenth centuries, glass was a medium increasingly restricted to the wealthy. It was still imported in a raw state from the Levant, but there is evidence for the relatively small-scale production of local-made potash glass in western Europe. It also seems likely that surviving Roman glass, both vessels and tesserae, were recycled on a considerable scale, and not just among the Franks, to make new glass vessels and also coloured window glass. Pope Hadrian's permission to Charlemagne implies that reusing glass was as commonplace as recycling other building materials. Substantial reuse of glass, though not for mosaics, is know at the monastery of S. Vincenzo al Volturno, situated between Rome and Naples. It is dated with some precision to between 792, when Abbot Joshua began his rebuilding of the monastic complex, and 881 when the monastery was burnt down by the Saracens. The raw materials for this glass-working seem to have been almost exclusively old Roman glass and tesserae.[14] At Farfa too, where the monastery was destroyed by the Arabs in 897, over 170 (Roman) tesserae were found but the quantity is so small that it is more likely that these were for the production of coloured glass than for a mosaic.[15] Some, at least, of the glass tesserae used in the mosaics of Rome itself appear to have come from older mosaics. In the ninth-century Zeno Chapel of S. Prassede, for example, the tesserae show signs of having been cleaned for reuse.[16] This supply would have been readily accessible to popes, who seem to have had the first call on old buildings.

The reuse of glass and tesserae at Aachen and at S. Vincenzo and Farfa may well indicate an issue over the supply of raw glass in Italy, one connected to a downturn in trade networks in the region noted in pottery production and by a decrease of shipwrecks.[17] If glass supplies were reduced, so costs presumably rose, and the demand for glass may well have dropped away to the point where it became both possible and easier to supply requirements by recycling old Roman glass. But how far the material from S. Vincenzo reflects a reduction in demand rather than a restriction in supply is unclear. The reuse may also denote a lot of old Roman glass lying

around to be reused: at S. Vincenzo, the nature of the glass assemblage – its homogeneity in chemical terms – implies that it all came from one source, potentially one large Roman building. That such buildings could contain vast amounts of glass and tesserae has already been suggested by the figures cited for the Baths of Caracalla, which contained about 300 tonnes of glass in one form or another. Although such a scenario hypothesises the survival of Roman buildings with their glass, this is not impossible: certainly stone, brick and marbles were in constant reuse from such buildings, and in the twelfth century Theophilus described in *De diversis artibus* how surviving mosaics were still being cannibalised to make coloured glass. The inference is of a considerable supply of old Roman glass, which suggests in turn the possibility of the existence of a number of earlier mosaics that have not survived. Where and what those mosaics were is unknown: they may well have been in major villas or even in churches fallen into disuse or sacked in the wars across the peninsula, but nothing exists to tell us.

MOSAICS IN ROME: FROM LEO III TO POPE PASCHAL I

In arguing that Charlemagne and Theodulf drew their inspiration from Italy and Rome, and used mosaic in part for its past imperial associations and in part for its present Christian connotations, the evidence for mosaic as an art form used in Rome in the ninth and tenth centuries needs to be considered. Already the material of the seventh and eighth centuries has indicated that mosaic-making was still alive in Rome, and although the evidence for the next two centuries is patchy, it indicates that the medium continued to be consistently employed there.

The palace at the Lateran in Rome, from where the pope sought to exercise both spiritual and temporal authority, was extensively added to in the late eighth century by Pope Hadrian I (772–95) and then by Pope Leo III (795–816), underlining its importance. Leo built two state ceremonial rooms, an enormous triclinium (effectively a state audience and banqueting hall) and an aula, a council room, both lined with mosaics. Almost nothing of these survives, other than a fragment of an apostle's head (now in the Vatican), some eighteenth-century copies made by Pope Benedict XIV still visible in the Tribune to the east of the Scala Sancta at the Lateran, and assorted descriptions and sketches.[18] The Triclinium appears to have had ten side chapels which contained mosaics relating to the Mission of the Apostles. The main apse seemingly contained seven figures, amongst whom were an Orant Virgin, Peter and Paul. From what can be reconstructed of the decoration, resonances with other Roman and papal churches are clear: S. Paolo *fuori le mura*, for example, with its Virgin Orans and Peter and Paul, not to mention the S. Venantius chapel in the Lateran itself. One of the messages of these images was clearly that Rome was the seat of the apostles, with the pope as their heir. The mosaics of the Aula made further reference to the pope's relationship with Charlemagne by including portraits of Charlemagne and Leo on the apse arch. These seem to have depicted Christ giving his mandate to Peter and the apostles in the apse (perhaps a version of the *traditio legis* used in the fourth-century mosaics of S. Costanza, or a version of the Mission of the Apostles); on the arch, to the left, Christ gave the keys of heaven to St Peter (or possibly a stole to St Sylvester, Peter's successor) and a banner to Constantine, and to the right Peter gave the papal stole to Leo and the banner of Faith to Charlemagne.[19] The associations being made between Constantine and Charlemagne are obvious, as are those between Peter and Leo. But all depend ultimately on Christ, and so both

Leo and Charlemagne appeared in complementary roles as chosen by Christ as rulers, chosen to defend God.[20]

The Triclinium and its mosaics have been compared to the Chrysotriklinos, the throne room of the Great Palace of the emperors in Constantinople. Here, at some point after the end of Iconoclasm in 843, an image of Christ was 'again' placed above the throne of the emperor, and the Mother of God, emperor and patriarch were also depicted.[21] The argument is that this representation copied an earlier one of Tiberios III (698–705), and that it was this previous image that Leo's Triclinium used as a model. This is possible but tenuous, for the pope need not have looked as far afield as Constantinople for his inspiration. Political imagery asserting papal and Roman standing was available closer to home, at St Peter's for example, and indeed in the Lateran itself, and the theme of the apse of the Triclinium reflected a traditional Early Christian refrain, emphasising the city's links with Peter, Constantine and Christ himself.[22] The Triclinium, built at much the same time as Aachen, offered a papal visual definition at the Lateran, the centre of papal domination in Rome, of the alliance of the Pope and the Franks (whether true or wishful thinking is another matter).[23] The political significance of the mosaics is clear: the importance of the pope as heir to St Peter, and the place of the Frankish king, Charlemagne, in Rome. They served as a statement about Rome's political alignment: it was Charlemagne who was offered the banner of Faith by Peter, not the Byzantine Emperor Constantine VI or, heaven forbid, the Empress Eirene. These images gave the pope – gave Leo himself – a dynamic role, showing him gaining his authority from God, a message both to the people of Rome and perhaps to the Carolingians, asserting his standing as an almost-imperial figure, to be treated like a king or even an emperor.[24] Hardly surprisingly, the Hall was used to host the pope's formal audiences with visitors from the West and Byzantium alike: Leo held a council with the Frankish bishops and abbots in the recently mosaicked Triclinium in 799.

A key aspect of Leo's pontificate was his ecclesiastical philanthropy, a useful tool to gain friends and influence people, both human and, more usefully perhaps, divine. Leo was a great giver to churches in Rome and elsewhere in Italy. A special list of donations is included as part of his life in the *Liber Pontificalis*: indeed, in 807, he made what may have been the largest single set of donations to the Roman churches in the medieval period.[25] These gifts included mosaics, though frustratingly the *Liber Pontificalis* is not often specific about the type of image given, and mosaics are only mentioned for four of the many buildings built or restored by Leo. These were in the church of S. Susanna, where the Pope had been ordained priest (the mosaics showed Christ, the Virgin, saints, Leo himself and Charlemagne: Leo advertising not only his heavenly divine support but also his earthly friends); and in the oratories of S. Croce at St Peter's and of the Archangel Michael at the Lateran, as well as another triclinium at St Peter's. Leo also rebuilt the church of SS. Nereo ed Achilleo and, although the *Liber Pontificalis* does not say so, the presence of Leo's monogram on the triumphal arch implies that the mosaics of the apse and arch were his commission.[26] These have been restored, and again the originals are known only through drawings and assumptions that what is there now replicates Leo's design. If so, then the triumphal arch had three scenes emphasising Christ's Incarnation: the Transfiguration in the centre, flanked by the Annunciation to the viewer's left, and the Virgin and Child with an angel to the right.[27] The scene in the apse (known only from a Renaissance drawing) looks remarkably similar to the sixth-century mosaic of S. Apollinare in Classe (where Leo is known to have carried out restoration work): the picture

shows a central jewelled cross on a small mountain and three sheep approaching it from each side.[28]

Leo's successor held the see for seven months and seems to have achieved little in terms of artistic sponsorship. He was followed by Paschal I (817–24) who, as a younger cleric, had benefited from promotion by Leo. Like Leo, in the best papal tradition, and for the best motives, Paschal was a great giver to the Church. To pull out only his mosaic donations, these were recorded by the *Liber Pontificalis* at St Peter's (in two oratories, that of S. Sixtus and that of S. Petronilla), and at three churches within the city: at S. Prassede and in the Zeno Chapel inside that church; at S. Cecilia; and at S. Maria in Domnica. The mosaics of these three churches survive, and the relationship of these mosaics to each other, to papal authority and to the Carolingians gives an interesting insight into Rome at this period. Much of the art of eighth- and ninth-century Rome can be read as an attempt to legitimise the autonomy of papal rule and demonstrate the church's position on certain issues of the day, and Paschal's mosaics provide a detailed case study.[29] In Paschal's work, many of the themes developed in earlier chapters come to the fore again – power, authority, propaganda – but they can also be nuanced towards what is understood of Paschal's own agenda in a way not always possible with other examples where less is known of the patron.

It is not known in what order Paschal worked on his three churches or, indeed, whether he worked on them sequentially or together.[30] If, however, the order described in the *Liber Pontificalis* is anything to go by, then he began with S. Prassede. This was a *titulus* church that he built on the site, or close to the site, of the earlier church it replaced. The church contained the relics of two thousand martyrs, whose bones Paschal had brought to the church from the catacombs. It was dedicated to S. Prassede, part of a pairing of sacred sisters who, with their father, were believed to have sheltered St Peter in Rome and to have suffered for their faith. The church dedicated to the other sister, S. Pudenziana, with its fourth-century mosaic, is little more than five minutes' walk away. In plan, S. Prassede is a large aisled basilica with a transept, a transverse crossing in front of the presbytery. No expense was spared: inside, it boasts an impressive range of marbles, columns and sculptures, many of which were *spolia* but some of which were specifically made for the church in an antique style. The mosaics are in the apse, triumphal arch and the choir arch, and in the little Zeno Chapel part way down the south side of the church. It seems likely that the rest of the church was painted.[31]

In the apse, Christ stands in the centre, surrounded by red and blue clouds and extending his right hand in blessing (Fig. 113). He is crowned by the Hand of God through the clouds. On his right, Paul escorts S. Prassede and Pope Paschal, with a square halo and offering the church; on his left are Peter, Pudenziana and, plausibly, St Zeno. The saints are unnamed, but it makes sense to identify them with the dedicatees of the church. All stand on a green ground. To right and left are palm trees; that on the viewer's left, behind Paschal, contains a phoenix, a symbol of everlasting life and hence resurrection and salvation. The River Jordan flows along the bottom, suggesting salvation through baptism. Below, a frieze of twelve sheep emerge from the cities of Jerusalem and Bethlehem and approach a central Lamb. Below them is a long inscription, hailing the zeal of Paschal. A garland of fruit and flowers encircles the inner curve of the arch, with Paschal's monogram at its centre. On the wall around the apse, the imagery is apocalyptic. At the top, the Lamb of God occupies a backless throne in the centre, flanked by seven candlesticks, four angels, and the evangelist symbols, and below them, in the spandrels,



Figure 113 View of apse and triumphal arch, S. Prassede, Rome, ninth century. The central axis is shared by Christ and Pope Paschal's monogram. Paschal is also the distinctive figure dressed in yellow with a square blue halo to the left in the apse mosaic.

stands the choir of the twenty-four Elders, holding up their crowns. The theme of apocalyptic salvation continues on the triumphal arch. Here, within a representation of a city, presumably the New Jerusalem with its gold and jewelled walls, Christ holds the centre space. He is flanked by an angel on either side. To his right stand a woman (probably Mary), John the Baptist, St Paul and six figures holding crowns, presumably apostles.[32] To Christ's left is another woman, most likely to be S. Prassede, with Peter and six more figures, the remainder of the apostles. Outside the city walls, bands of martyrs, dressed both as clergy and as laity, wait to be admitted by the angels guarding the city gates. On the left, a group of female martyrs may well be headed by the saintly sisters again, Prassede and Pudenziana; to the right, St Peter waits to greet the elect. Below both groups, to right and left, confessors enthusiastically wave palm branches. Paschal's monogram is again at the centre of the arch. The guarding of the heavenly city by Peter and Paul suggests that it may also represent Rome itself, and the crowd of faithful coming into it from outside the walls may well indicate those martyrs whose relics Paschal had interred in the church.

The mosaics contain a great deal of iconography familiar in Rome. The apse and the front of the apse arch are immediately and obviously comparable with the mosaics of SS. Cosmas and Damian, as well as carrying motifs (the sheep and

the clouds, for example) seen in a variety of other earlier Roman churches, including S. Pudenziana. They call up similar messages: the presence of the patron before Christ; the blessing of the saints; the suggestion of the Second Coming. The triumphal arch is very distinctive. It is a scene of salvation and reception in heaven, and an evocation of the Second Coming and of the saving of the righteous, but it also conjures up the city of Rome itself, and the church and its saint, Prassede, and its translated martyrs. Indeed, just as the apse of Prassede's sister's church may have brought recollections of both Jerusalem and Rome to its viewers, the same duality was perhaps created here.

The design is full of detail. But from the main body of the church the mosaics can be seen as a single coherent whole, a stunning overall programme that cascades down from the triumphal arch into the apse arch and the apse itself. Taken together, it proclaims a uniform message of salvation through and by the saints at the Second Coming. Paschal himself holds a dominant position, for his monogram shares the central vertical axis of the whole programme with Christ (Christ in Jerusalem/Rome, monogram, Lamb, Empty Throne, monogram, hand of God, Christ, Lamb, inscription). In this way, in addition to his portrayal in the apse, Paschal was included among the elect. Not only that; when the living popes, Paschal himself or his successors, stood at the altar of the church to celebrate Mass, or sat below it – and the pope was the only person with his own seat in church, located at the apex of the apse, facing the altar – they too would have shared in this axis, present as human and image, eternally part of the divine celebration.

These mosaics also had a role within the church itself, as a key part of the liturgical function of the church: making the presence of God plain through the Eucharist and that of the saints through their relics and the actions of Paschal.[33] The images helped establish the sanctity of the space and they may have related to the Roman funerary liturgy.[34] But, as a *titulus* church, S. Prassede had another significant role. The most important function of the *tituli* churches of Rome at this time was to stage the papal Mass on designated feast days, mostly in Lent; they were then used for regular masses when the pope was not in attendance. Consequently, such churches served as places for collective worship for specific communities, to whom their themes of salvation, judgement and redemption were as relevant as they had ever been.

The little cross-shaped domed chapel of S. Zeno off the north-east aisle – it is 5 × 5.5 metres at its greatest – had a different, less public function. It was built as a funerary chapel in honour of Paschal's mother, Theodora, who is depicted inside. Again, Paschal was lavish in his outlay. There is a marble and granite revetment, considerable use of *spolia* and contemporary carvings, and a splendid *opus sectile* floor incorporating a massive porphyry roundel. The chapel also contained the relics of St Zeno himself and two other martyrs, brought by Paschal from the catacombs. Outside the door is a mosaic panel, a double arch filled with roundels of Christ, Virgin and saints. Inside, the scale of the chapel means that it is possible to reach out and touch the mosaic (Fig. 114). It is like standing inside the interior of a small, crystal-encrusted casket, and as claustrophobic. The chapel bursts with detail. On the vaulted golden ceiling, a bust of Christ in a roundel faces the door, to greet those entering. This roundel, shaped like a victory wreath, is supported by four mosaic angels standing on mosaic globes which in turn appear to stand on the real marble capitals of the real marble columns below. There is a small altar in front of the door, with a mosaic panel of the Virgin and Child (dated anywhere between the eleventh and thirteenth centuries) replacing a scene of the Transfiguration, which is cut



Figure 114 At the top of the lunette, deer drink from the rivers of paradise flowing from below the mountain occupied by the (somewhat one-eyed) Lamb of God; below, from left to right, are the bust representations of Theodora, a saintly sister, the Virgin Mary, and the other saintly sister: from the Zeno Chapel, S. Prassede, Rome, ninth century.

away. In the short cross arm to the (viewer's) left of the altar is a partly destroyed scene of the Anastasis (Christ's descent into Hades and his resurrection of the dead there and four quarter-length busts of women: Theodora (with a square halo and inscription) on the far left, then an unnamed saint, then the Virgin, then another unnamed saint.[35] These two anonymous women may once more be the sacred sisters, Prassede and Pudenziana. Above them, a rather one-eyed Lamb of God stands on a hill from which the four rivers of paradise descend and where deer drink. Above this are three more women martyrs, Prassede and Pudenziana again, and Agnes. To the right of the altar are three-quarter-length figures: Christ in the centre and two saints; above them, three full-length saints, John, Andrew and James; above the main door, facing the altar, are two further full-length saints, Paul and Peter. The imagery is one of resurrection and salvation (the Transfiguration, the Anastasis), watched over by the ascended Christ in the dome, with the assorted saints perhaps buoying Paschal's (and indeed Theodora's) prayers and hopes for the afterlife.[36]

It has been suggested that the imagery displayed the pope's iconophilia, rejection of Iconoclasm and support of Byzantine exiles (of whom more later). Whilst such a public and political reading is possible, more significantly the space was one dedicated to the memory of Paschal's mother and the hope of her redemption, and so the chapel was also a private, intimate space. At S. Stefano Rotondo, a pope dedicated a chapel to his father; here, the same was done for

a mother. The Zeno Chapel is one of only a few early medieval side chapels to survive in Rome, for many were destroyed and replaced in the Renaissance and afterwards. It is the only one to preserve so much of its interior decoration. But auxiliary chapels and their altars were increasingly important in medieval western churches as reserved family spaces for the burial of the dead, prayer and commemoration, especially as the great high altar, with the development of chancel and rood screens, became increasingly isolated and formalised away from the general congregation.

The second of Paschal's surviving rebuildings was at another *titulus* church, S. Cecilia in Trastevere. The story of Paschal's search for the relics of St Cecilia and his vision of the saint encouraging him to continue his hunt was one of the best-known stories about this pope, a story that spoke to his piety and also to his being favoured by the saints. It was as a result of his revelation and discovery in 821 that the church was rebuilt over the site of the saint's house, to contain her body and those of her five companions, brought, as with the relics of S. Prassede, by the pope from the catacombs.[37] Paschal again, as at S. Prassede, substantially rebuilt the earlier church as a large basilica with elaborate and expensive fixtures and fittings, and put mosaic in the apse and on the apse arch[38] (Fig. 115). The imagery is very similar to that of S. Prassede: Christ is in the centre of the apse, crowned by the Hand of God, and flanked by Paul, Peter and accompanying saints. On Paul's side, an unnamed female saint (presumably Cecilia) has her arm around an ecclesiastical figure with a square nimbus and a model



Figure 115 View of apse, S. Cecilia, Rome, ninth century. Paschal is again present as he was at S. Prassede, and his monogram is again at the crown of the arch. Above him here, as at S. Prassede, and as above Pope Felix at SS. Cosmas and Damian, sits a phoenix, symbol of eternal life.



Figure 116 View of apse, S. Maria in Domnica, Rome, ninth century. Here Paschal kneels in the presence of the Virgin and Christ, no longer needing a saint to bring him forward.

of the church (he must be Paschal). On Peter's left are two unnamed saints, a young man, perhaps Valerian, Cecilia's husband, and St Agatha, the other saint to whom the monastery attached to the church was dedicated. The ground is a meadow of flowers; there are palm trees to left and right, and that on Paschal's side has a phoenix sitting in it. The background is a deep blue, rather than gold, but Christ is still surrounded by the usual Roman red and blue fluffy clouds. The crown of the arch bears Paschal's monogram again, giving him his central place in the image. Along the bottom, the customary sheep emerge from the heavenly cities of Jerusalem and Bethlehem and head towards the Lamb on a hillock in the centre. The apsidal arch (now totally obscured by a foul nineteenth-century stucco vault) has a Virgin and Child at its centre, flanked by angels. Ten female saints move towards them, carrying crowns and flanked in turn by palm trees, and below them the twenty-four Elders of the Apocalypse hold up their crowns. Resonances with the mosaics of SS. Cosmas and Damian are very clear; evocations of traditions within Roman (and even Ravennate) mosaic-making are apparent in the sheep, the clouds (S. Venantius), Peter and Paul (S. Lorenzo), the patron, the saints.

Paschal's third rebuilding was the large basilica church of S. Maria in Domnica, this time a *diaconia*, or charitable distribution centre for city inhabitants and pilgrims alike.[39] Like S. Prassede and S. Cecilia, it too was extremely well appointed and it too had mosaics on the apse and triumphal arch. This apse mosaic is quite different, however (Fig. 116). Rather than Christ flanked by saints and pope, it depicts the

Virgin and Child enthroned in the centre, with Pope Paschal, with a square halo and scroll, on his knees before them; and on either side a great crowd of turquoise-haloed angels. A long inscription below extols the pope as restorer of an ancient ruined church and hails his devotion to the Virgin.[40] Paschal's monogram is on the crown of the arch immediately above the Virgin's head. The apse arch shows Christ in the centre, in his divine apocalyptic majesty, seated on a rainbow and flanked by angels. He blesses with his right hand and holds a sealed scroll in his left. Six apostles flank him, with – as we have consistently seen in Rome – Peter to his immediate left and Paul to his immediate right. Below Peter stands John the Baptist pointing to the apse, and below Paul is John the Evangelist, holding out his hand in blessing.

Many elements of these mosaics are clearly Roman: the assemblages around the Virgin and around Christ in Majesty; the locations of Peter and Paul; even the presence of the two Johns. However, although including the patron is not an unusual feature in mosaics (and indeed in medieval Christian art more widely), this is the first surviving Roman image to position him kneeling at the feet of the central holy figures, rather than being brought in to their presence. Paschal has been so bold as to do away with a saintly sponsor, and once again the location of his monogram at the centre of the arch, placing him centrally between Virgin and Christ above, emphasises his pivotal place in the image. The two images of Christ, as Incarnate Child and at his Second Coming, underline his divine and his human nature, a debate which formed one of the central issues in Byzantine Iconoclasm and justified the use of religious images.[41] However, the use of the Virgin and Child to represent the Incarnation was nothing new in Italy or Rome. That the design is unusual in what survives in mosaics in Rome may simply be chance of survival or even – God forbid – an original design to make a specific point for Paschal, for in many ways the image overtly reflects Paschal, the pope, as intercessor between two worlds, a statement of papal standing as much as of iconophilia.

On one level, because all of Paschal's mosaics share elements from well-established Roman compositions, notably from SS. Cosmas and Damian (or, if SS. Cosmas and Damian reflected what was in St Peter's, then from St Peter's itself), they might be described as 'conventional', echoing 'standard' themes of salvation and redemption through intercession; the visualisation and promise of the world to come; and the heavenly hierarchy extended to admit the donor. If these subjects were typical, they were no less meaningful for that. But each also had elements specific to each church: at S. Prassede, the apocalyptic vision included a vision of the New Jerusalem/Rome, and displayed the pope's two thousand relics; at S. Cecilia, the pope's divine vision was highlighted – this church was the result of Cecilia's communication with Paschal; at S. Maria in Domnica, Paschal expressed his devotion to Mary but showed himself as an intercessor also.

So Paschal's churches were also a continuing assertion of papal authority, just as his oratories in St Peter's were. Unsurprisingly, he also paid a great deal of attention to S. Maria Maggiore, that embodiment of papal authority, orthodoxy and supremacy. His work reflected Paschal's specific concerns as patron and pope and underlined his sanctity and status as intermediary before God. His mosaics clearly displayed elements of power common in Rome and the early medieval world more widely: the display of the patron and his name, aspects reflected in the buildings themselves. Paschal's building projects differed from his contemporaries. Unlike Stephen IV (816–17) and before him Leo III, he did not restore many buildings partially, but rebuilt a few buildings entirely.[42] These were all prominent projects in the city, built at much the same time, even

overlapping, involving a lot of manpower and expense, and reusing a great deal of material from other earlier buildings. Their significance as major papal projects was made most obvious through the internal furnishings and adornments: all three reused a considerable amount of marble; all three were given immense donations of precious metals; their mosaics are among the most extensive surviving. Further, in terms of resources, Paschal created new monasteries to service the buildings at S. Prassede and S. Cecilia.

Paschal's churches additionally highlight two aspects of Roman religious practice. First, increasingly, the liturgy appears to have become more sumptuous, perhaps to articulate the political and social standing of the pope and clergy.[43] Second, the *tituli* churches – of which S. Prassede and S. Cecilia were both examples – held a significant place in church worship.[44] These tended to be among the oldest and most sacred of the churches in Rome. They had three or four priests but they were ordained not for a specific church but as priests for Rome itself, and as such, from very early on, they had taken a large part in assisting in the sacramental functions of the bishop of Rome, including the celebration of the liturgy in the five great papal basilicas (St Peter's, S. Paolo *fuori le mura*, S. Lorenzo *fuori le mura*, S. Maria Maggiore and the Lateran). By the mid-eighth century there were twenty-eight of these titular churches, whose priests became known as 'cardinals'. The two strands came together as gradually the great patriarchal basilicas and *tituli* were used for the celebration of stational liturgies, in which the popes moved from church to church in large and dazzling processions.[45] Such liturgies were a way of creating public spaces in which the pope could appear as shepherd of his flock, as Peter's representative among his people, and as a cornerstone in religious life across the city on a far bigger scale than if he remained in the Lateran alone. They helped to pave the way for the eventual political leadership of popes. In this context, Paschal's work at S. Prassede and S. Cecilia was of enormous importance, creating a suitable setting for the celebration of the papal stational liturgy, and underlining Paschal's role and continued presence within it. And it was surely no coincidence that all three of his churches were on the edge of important well-populated parts of the city: S. Prassede on the key major route between the Forum and S. Maria Maggiore, on a processional route used in the papal liturgy; S. Cecilia in the densely populated area of Trastevere, and perhaps consolidating a papal presence along processional routes into Trastevere; S. Maria in Domnica on the Celian Hill, a part of a cluster of churches around the intersection of two key roads and by the Aqua Claudia, and not that far from the Lateran.[46]

By rebuilding these three churches on such a lavish scale, Paschal created centres of worship for these three areas; the nature of the relic transfers to S. Prassede and S. Cecilia ensured that both would be important parts of any worshipper's experience of Rome. By moving relics into them, Paschal helped develop a role for urban churches (as opposed to those outside the walls, where this had long been the case) as a shrine and repository of the bodies and relics of the saints. This changed the nature of what went on in these churches, as well as influencing the design of church architecture.[47] And the scale and expense of translation and building ensured that the churches would be noticed at home and abroad. Nothing previous matched the scale of Paschal's work and it was in great part thanks to this that the cult of relics expanded so much in Rome.[48]

It was also a bid to safeguard and restore the saintly patrimony of Rome, for the presence of the Lombards in the late eighth century made the traditional shrines outside the city less safe for the faithful, sites of easy plunder and subsequent neglect and decay.[49] This brings in a further

political dimension to Paschal's work, his role in steering the papacy and Rome through the conflicts of ninth-century Italy. The late eighth century had witnessed a struggle for power in Italy between Franks, Lombards, Byzantines and Romans in the form of the papacy; it had seen tussles for supreme Christian authority; it witnessed the growing power and threat from Arabs. The death of Charlemagne in 814 and the succession of his only surviving legitimate son, Louis, had changed things still further. Paschal's papacy was not a peaceful one, with conflicts in the 820s between the pope, Louis' son Lothar I, the Carolingian ruler in Italy, and the Roman nobility, culminating in Paschal's being accused of murder and indeed compelled to swear an oath of innocence. His reign was a turning point for relations between Rome and the Carolingians as Paschal sought greater autonomy, a development that was to lead to tensions and conflicts affecting the rest of the century.[50]

Paschal's cult of relics conveyed his papal authority as the individual empowered to move these sanctified remains, a sign to the Franks, who were great relic collectors (the *Libri Carolini* had encouraged the veneration of saintly remains), about who controlled this material.[51] Paschal's artistic imagery also asserted the independence, standing and power of the papacy. Leo III had shown himself with St Peter and Charlemagne; Paschal was alone with God. It was a message meant for those in the city and those outside it, for the Roman clergy and nobility, for the Franks and for the Byzantine emperor.[52] Papal churches were vehicles to show papal authority and for papal supporters and members of the papal court to act through; Paschal's church building was a key part of a coherent campaign on his part and that of his administration to construct and command authority and autonomy for the office and the person of the pope, and indeed for the papal state of Rome more widely. Increasingly, these affirmations of the city of Rome as a sacred area, the city of God, displayed through papal processions and church building, created a sanctified Rome in which the pope gained his authority from God: the churches and their mosaics all reflected glory to God; glory to the city; glory to the papacy; and glory to Paschal.

AFTER PASCHAL

One further mosaic remains in situ from ninth-century Rome. Probably between 829 and 831, some five years after Paschal's death, and almost certainly aware of his predecessor's work, Pope Gregory IV (827–44) rebuilt and decorated the *titulus* church of S. Marco – it had been his own *titulus* church – situated close to the foot of the Capitoline Hill.[53] Among that redecoration was the use of mosaic in the apse and apse arch (Fig. 117). In the centre of the golden apse stands a large figure of Christ on a golden footstool emblazoned with an A and an Ω, alpha and omega, first and last. He blesses with his right hand and holds a book, with a Latin inscription, 'I am the light, the life, the resurrection.' Above his head, a divine hand holds a wreath; below his footstool, a dove perches on the edge of a fountain. To his right hand stand St Felicissimus, then the Evangelist Mark and finally Pope Gregory in a square halo, clutching a model of the church. To his left are St Mark (pope in 336), to whom the church is dedicated, St Agapetus (pope 535–6) and St Agnes. All six stand on little decorated mats bearing their names. Below them, in a broader band than usual, twelve sheep move out from Jerusalem and Bethlehem towards a central Lamb on its little hill with the four rivers of paradise. Around the inner face of the apse is a garland of fruits and leaves with Gregory's monogram in the middle at the crown of the arch. The apsidal arch has a truncated version of some common imagery:



Figure 117 View of apse, S. Marco, Rome, ninth century. Pope Gregory is brought to Christ by St Mark. Here, all the figures including Christ stand on footstools bearing their names or identifying marks.

a bust of Christ in the centre is flanked by roundels with the evangelist symbols and a sky of blue and red clouds, whilst Paul and Peter occupy the (viewer's) left and right spandrels respectively.

The iconography is not particularly new or inventive. It echoes Paschal's mosaics in S. Cecilia and S. Prassede, and it is reminiscent of SS. Cosmas and Damian and the triumphal arch of S. Lorenzo *fuori le mura* among others. It is what we might call 'typical Roman': Christ; saints; donor; evangelist symbols; Peter and Paul; sheep; rivers. But, like all these characteristic examples, it is no mindless copy. For once, unusually, the donor is introduced not by the titular saint of the church, St Mark the pope, but instead by Mark the Evangelist. The inscription below the apse mosaic ambiguously asks Mark, without specifying which Mark, to plead for Gregory before God. Further, Peter and Paul, normally to the left and right of Christ, are replaced by Mark the pope on Christ's left and St Felicissimus on his right. Paul and Peter appear instead in the spandrels of the apse arch, in the space usually (as at SS. Cosmas and Damian and S. Prassede, for example) occupied by the twenty-four Elders of the Apocalypse. These differences have led to the mosaic being seen as a mistake.[54] Apart from the improbable implications this conveys about papal and artistic ineptitude, it is a consistent theme in medieval art that the saints chosen by patrons

tend to be ones significant on a personal (and political) level to them, St Cecilia for Paschal for example. As with Paschal's mosaics, Gregory's served as a response to contemporary religious and political events.[55] He, like Paschal, found himself involved in Carolingian conflicts, internal disputes between Louis the Pious, his son Lothar and the Frankish nobility. He also found himself needing to assert papal authority, specifically over Venice and Venetian claims to ecclesiastical autonomy based around their appropriation of the body of the Evangelist Mark in the early 830s when the saint's body came to Venice and a large and impressive church was constructed to house it. Gregory's employment of Mark at much the same time may have been coincidence; it was more plausibly a Roman response to these Venetian assertions, a bid to show Mark the Evangelist as part of the Roman saintly heritage and a papal ally. Mark was also a significant saint for the Carolingians, and so Gregory's message about papal supremacy presumably resonated with them also.

On the basis that Gregory's choices of saint were deliberate, what then of the other saints depicted, Agapetus, Agnes and Felicissimus? Although the church held the relics of several saints, it did not have anything of these three. Agnes' relics remained in her church outside the walls; she was, however, a greatly revered Roman saint and one represented in various Roman churches – Paschal highlighted her in the Zeno Chapel, for example. But relics of both Agapetus and Felicissimus were sold or sent by Gregory to sites in the Carolingian kingdom, including Fulda, in the 830s. So, in contrast to previous practice, at S. Prassede and S. Cecilia for example, where the mosaic showed the saints whose relics were held in the church, at S. Marco the apse showed saints who were not contained within the building.[56] Perhaps Gregory's aim was to show that the images could replace the saints' corporeal presences and that Rome lost nothing by the transfer of relics elsewhere, a point that was true also for Mark the Evangelist. If so, it also implies that Gregory equated relics and images and thus was willing to defend the importance and validity of figural art. Coming at just the point when the Emperor Theophilus was favouring Iconoclast beliefs in Byzantium, this was an assertion of papal ecclesiastical leadership and orthodoxy in the Christian world. So the mosaic at S. Marco was not a low-grade mess-up of previous models but a well-chosen selection for Gregory's own ends and own papal authority.[57] In further assertions of his own authority, Gregory was also responsible for restoring the mosaic on the façade of St Peter's, for mosaics in the St Gregory Chapel, his own side chapel of St Peter's, and for renovations of the Lateran.[58]

Incidentally, the mosaic has been seen as very different in style from that of S. Cecilia, with modelling and decorative devices said by some to have come 'from the east'.[59] But whilst there are stylistic differences between the mosaics of S. Cecilia and S. Marco, these may reflect nothing more than different Roman workshops. Certainly Gregory, in contrast to Paschal, favoured large gold backgrounds to his mosaics. This can be read in symbolic terms, a different means of demarcating the heavenly space and a move away from apocalyptic pink and blue clouds; it may also reflect a practical question of access to materials. If nothing else, the use of gold surely implies that there was no problem with resourcing the work.

After Gregory's commission, however, nothing survives in mosaic from Rome until the twelfth century. Whether this means that mosaic as an art form died out and had to be revived or whether nothing survives is impossible to say. Part of the reason may have been a period of short-lived popes, often in conflict and civil strife within the city, diverting energy and resources away from building more generally.[60] Another might be that the mid-ninth and tenth centuries were periods of

considerable external pressure on Rome. By the mid-ninth century, the 'Saracens' (Arabs) dominated the Mediterranean sea ways, restricting trade, and in 846 a Muslim raiding party reached Rome itself. It failed to break through the mighty city walls, but plundered extra-mural buildings and churches including St Peter's. Tenth-century Italy suffered from Fatimid raids and conflicts with Byzantines in southern Italy.[61] Consequently, papal resources, diminished by the sea-threat, had to be focused on keeping the city walls intact and on repairing damage. Even so, popes did manage to maintain ecclesiastical buildings. Sergius II (844–7) began the apse of SS. Silvestro e Martino ai Monti, completed by Leo IV (847–55).[62] Both of these popes built or repaired oratories decorated with mosaics in St Peter's, as indeed did Gregory IV and Paschal himself. Hadrian III (884–5) carried out restoration work on the Lateran Baptistery in 884, and the church itself, damaged by earthquake in 896, was repaired. A final factor is that the *Liber Pontificalis*, invaluable for what it does tell us (albeit not necessarily 'accurately') about the lives and works of popes from Peter himself onwards, ends with Stephen V (885–91): lacking the *Liber*, papal patronage is far harder to trace.[63]

ROME – A SUBURB OF CONSTANTINOPLE OR AN ESTATE OF CHARLEMAGNE?

Two concepts which seem to be mutually exclusive have coloured scholarly interpretations of mosaics, art more widely and indeed the standing of Rome itself between the seventh and tenth centuries. They deal with questions of influence. One strand believes that Carolingian influence sparked a Renaissance in Rome in the early eighth century, dying away into a 'Dark Age' by the tenth century. The other has argued for Byzantine influence in Rome, suggesting that certain popes were 'Greek' and favoured Byzantium. I discussed the problematic concepts of 'Greek' popes in the previous chapter, but it is an argument that is found in terms of Paschal I and his mosaics, especially those of the Zeno Chapel and its purported Byzantineness. In the context specifically of mosaic art, the two come together, as scholars have been undecided as to whether the mosaics of the seventh to tenth centuries in Rome reflect a 'Carolingian Renaissance' and thus need to appear Early Christian, or whether they reveal Byzantine influences, in which case they need to appear Eastern. Both views, however, appear to share a perspective that the power to affect and influence events in Rome came strongly from outside the city, that Rome itself was a passive receptor of external stimuli, rather than a creator of its own imagery.

A CAROLINGIAN RENAISSANCE?

The so-called Carolingian Renaissance has been defined as a visible surge in cultural productions that reflected an interest in humanistic disciplines and a use of ancient models, one sparked by the Carolingians and apparent in their territories but also visible in Rome, where an era of decline between the seventh and eighth centuries was ended by a period of vigour stimulated by exchanges between the papacy and the Franks. A more nuanced take sees it as an 'improvement' of cultural practices rather than a rebirth, but the premise of outside influence leading to renewal remains central.

In artistic terms, Richard Krautheimer used the concept of the Carolingian Renaissance to explain the development of church architecture in Rome in the Middle Ages.[64] Broadly speaking, Krautheimer expounded a cyclical theory of architectural advance: in the fourth century, Constantinian architecture took a stand against an ordered Classicism, since that was something

inherently pagan; in the fifth century, there was a rebirth of Classicism in a Christian context, mainly thanks to Sixtus III; the late fifth to seventh centuries in Rome were 'Byzantine centuries' with 'Eastern' church plans and interior decoration, including mosaic; the late seventh and early eighth centuries were a dark age with almost no building activity; then came a revival of architecture under Carolingian influence in the later eighth century, one which contrasted with the earlier 'Eastern' or 'Byzantine' phase by being 'Western' or even 'Roman' in character. This 'Renaissance' of architecture died away after the pontificate of Leo IV, and the tenth century was such a low point that it did not even merit being described as a 'dark age', before the revitalisation of religious architecture in Rome in the twelfth century: 'Nothing worth mentioning was built in Rome from 860 up to the end of the millennium.'[65] In this scheme of development, Krautheimer saw S. Prassede and S. Cecilia as crucial parts of the Carolingian renewal after the Dark Ages, since they were understood to be medieval revivals of fourth- and fifth-century basilica churches; indeed, he considered the transept at S. Prassede to be a conscious and deliberate derivation from Constantine's St Peter's.[66] In this model, 'Byzantine' mosaics were one of several foreign or Eastern elements that the Carolingian Renaissance eliminated.

Although Krautheimer himself recognised many of the flaws in his arguments and redeveloped many of his conclusions, his general paradigm has been widely accepted and used. In spite of this, it has become increasingly evident that the hypothesis really should be discarded: new archaeological data, new datings and new interpretations have changed the picture considerably.[67] Krautheimer's typological history of church architecture is no longer regarded as convincing: neither architecture nor art develops in a logical sequence and in neat collections of types; indeed, the use of the term 'develop' is itself loaded, suggesting a progress from bad to good. The selected and selective characteristics identified by Krautheimer as 'eastern' are actually visible in the new churches of Hadrian I and Leo III built in the 'renaissance' period, when such features were supposedly done away with, and many of the 'western' features are visible in buildings of the 'Byzantine period' and the 'dark age'.[68] For instance, the so-called Constantinian basilica plan never really stopped being built, but continued in use between the fourth and ninth centuries; and although associations can be made between S. Prassede and St Peter's, the transept that Krautheimer saw as such an important link between them is actually found in a variety of Roman churches constructed between the fourth and ninth centuries. This is not to say that such associations did not exist, but rather than interpret them in terms of architectural progress, a sense of an invigorated Constantinian architecture, we now prefer, in an equally biased fashion, to interpret any architectural connections made by Paschal between his churches and St Peter's as a reflection of his desire for papal authority, a gesture of political reality. In terms of the interpretation of mosaics as an Eastern or Byzantine art form, I would make the point that they began their existence in Rome, not Byzantium, and continued to be steadily employed in Rome from the fourth to the eighth century.

The Carolingian Renaissance was very much an art historical construction in the first instance. The idea, however, was then translated into a broader historical context that perceived eighth- and ninth-century Rome as a place needing revitalisation, and the energetic Franks as the people to do it. The idea of Roman regeneration was founded on a belief that Rome in the early Middle Ages was a city in ruins, a city that had experienced vicissitudes, from the sacks of 410 and 455, the end of imperial Rome, the Gothic–Byzantine wars of the sixth century and

the Lombards, to a variety of natural disasters from plagues to fires that had left it poor, depopulated and in decay. Yet the rumours of Rome's demise seem to have been exaggerated. By the late eighth century its population was perhaps 25,000; this is a drop, but it also means that Rome was still a very large city, whose inhabitants lived in clusters across the whole area enclosed by the city walls.[69] Building did not cease but continued throughout the 'Dark Ages' and it is perhaps more accurate to say that few buildings survive from this period rather than that few buildings were constructed. Looking only at church building, between *c.* 640 and 772 at least fifteen churches were built or converted from earlier buildings, with another twenty-two between 860 and 1000.[70] Judging from the material remains of both the 'Carolingian' period and the ninth/tenth centuries, they reflect a high quality of construction. The size and nature of the city meant that the sizeable workforce needed for construction and many of the materials needed, from bricks and blocks of building stone to marbles and mosaics, were actually readily available. Between 715 and 891, the *Liber Pontificalis* gives information on 263 separate papal construction projects, 174 inside the city itself, as well as huge donations to the churches of Rome, perhaps around 4,400 pounds of gold and 46,000 pounds of silver.[71] Mosaics continued to be sponsored, certainly in the eighth century, though possibly not in the ninth and tenth.[72] By Paschal's time, it has been calculated that there were perhaps 130 papal churches in Rome and at least another hundred churches outside papal administration.[73] All in all, these are not small numbers. In fact, the evidence for both buildings and papal donations suggests that Rome had a thriving economy. What had changed, like the nature of the city itself, was that it was no longer the centre of an empire. Instead it had to rely, successfully and profitably in fact, on its own local assets, a mixture of resources as varied as plunder from the Avars; pilgrims and travellers to Rome's many attractions; the city's place as a religious and diplomatic centre and as the centre of a luxury trade network across the Mediterranean, including Arabs and Byzantines alike.[74]

Although Rome was less a city in decay than one different from imperial Rome, the alliance between the papacy and the Franks certainly brought peace and prosperity, which in turn freed more resources for building activity. But that activity was not in a 'classicising' (deriving from Classical Rome) but in a 'Roman' style, by which I mean an assimilation of models and materials available and in use in the city of Rome, both for papal and for political purposes. In other words, (church) building in Rome was more about Rome than about renaissances or Carolingians or even Byzantines. This construction work can be seen as an element in papal campaigns asserting Rome's position as God's city to the external world, perhaps above all to the Franks, and in part to underscore the pope's own position in that city during a period when popes were not always popular and the nobility strove to have a voice in papal politics – when Leo III sought Charlemagne's help, it was not because he admired the Franks but because he needed them to shore up his position.[75] As for the Franks, surely Charlemagne was looking to Rome and was keen to highlight the Roman aspects within Frankish culture (this seems to me to explain his use of mosaic) for his own ends, perhaps not so far removed from his claims as Holy, Roman and Emperor.

So there seems no justification for a 'Carolingian Renaissance' or for seeing Rome as a Frankish estate. The eighth, ninth and tenth centuries were a period when the papacy, the Lombards, the Franks, the Byzantines and the Muslims were regularly fighting or allying with each other in order to get control of different bits of the Italian peninsula. Popes such as Hadrian, Leo and Paschal needed to steer a course for Rome through and around these very different conflicting powers. The alliance with the Franks benefited Rome in many ways, offering

the popes a level of security against the Lombards, the Byzantines and even the Roman nobility, but it also posed its own threats to Roman autonomy. It did not rejuvenate the city so much as continue trends in building that already existed. And in terms of the mosaics, these serve to highlight the resources available in Rome and to underline the continued power of Rome's Early Christian heritage.

What is apparent is that throughout the Middle Ages and indeed the Italian Renaissance, when popes had money they built. In the late eighth and ninth centuries, the papacy was relatively wealthy and there seems to have been an intensified building programme in the city. By the mid-ninth century, when the 'Saracens' plundered St Peter's, popes were more concerned with keeping Rome safe, though Stephen V's (885–91) work at S. Apostoli and Anastasius III's (911–13) restoration of S. Adriano suggest that popes never abandoned church building. But a new trend is apparent in the late ninth and the tenth centuries. None of the twenty-two churches known to have been built between 860 and 1000, with the exception of Sergius III's (904–11) repairs to the Lateran, which may possibly have included the apse mosaic, was a papal foundations and none appears to have contained mosaic. Instead they can all be attributed to members of the up-and-coming nobility of the tenth century, for personal or monastic use, making statements about their wealth, authority and prestige, suggesting a shift in power balances within the city.[76] Was it the case that such patrons did not favour mosaic as a medium?

PASCHAL'S GREEK MONKS AND BYZANTINE MOSAICS?

In contrast to the Carolingian Renaissance with its emphasis on Frankish energy revitalising Rome, the other significant cultural influence on the papacy and, in this period, especially on Paschal, is said to have been the Byzantine Empire. Whilst it is certain that popes including Paschal did have to work with, negotiate with, co-exist with Byzantium and whilst it is clear that the ins and outs of this relationship form a major aspect of political activities for both parties during the whole Middle Ages, not just the eighth, ninth and tenth centuries, the elements of this that have appeared as key strands in art historical discussions of the period are misleading.

The issue is one of 'Greekness' once again, beginning with questions about the origins of Paschal's mosaicists and the supposed 'Byzantine' nature of the actual mosaic programmes, particularly at S. Prassede and in the Zeno Chapel, which has been seen as a condensed and slimmed-down version of a cross-domed church.[77] From this, it has been a short step to seeing Paschal as another pope influenced by Byzantium.

It is an argument bolstered by the *Liber Pontificalis*' record that at S. Prassede Paschal established a monastery of a 'community of Greeks'.[78] Quite what that means, however, is less clear. Answers have ranged from a community of monks, perhaps fleeing from Iconoclasm in Byzantium, using the Zeno Chapel for the Greek liturgy whilst the rest of the church used the Latin liturgy (if nothing else, it would have been a very cramped celebration) to a female Greek population including Paschal's mother, the nun Theodora. From this, it has been no great leap to suggest that the Greek monks were responsible for the mosaics of the Zeno Chapel, since, so it is said, the iconography and style are distinctly Byzantine.[79] From the fleeing monks and the Byzantine mosaics, it is another easy jump to the popular but pernicious and misleading belief that Byzantine artists fled to Rome from Constantinople during the period of Iconoclasm because they were persecuted for making religious art and there was no work for them there,

and that this sparked a revival in art in general in Rome: 'The frescoes [of S. Maria Antiqua, the work of Popes John VII and Paul I] are especially precious because almost all icons from the Byzantine Empire were destroyed in AD 726 by decree of the Emperor Leo III. This caused many monks to flee to Rome, where they passed on their skills to the artists who decorated the church.'[80] The same sort of claim has been made for Paschal's mosaics of the ninth century and his installation of these Greek monk-artists is perceived as a demonstration of his support for the Iconophiles, lent support by the survival of a letter to Paschal from a leading Constantinopolitan Iconophile monk, Theodore of Stoudios, describing Rome as a 'city of refuge' for Iconophiles.[81]

Whilst an interesting reflection on scholarly attitudes to Byzantine and Roman art and to issues of quality (once more, the clever Byzantines teach their skills to the Romans), the fleeing Greek artist-monks pose several difficulties. Paschal's 'community of Greeks' presents the same problem as the 'Greek' popes of the previous century: what is meant by the label 'Greek'? Whilst the community may have been made up of monks from the Byzantine Empire taking flight from Iconoclasm, they may equally have been Greek-speaking monks from elsewhere in Italy, Naples for example. As for making Paschal's mother, Theodora, into a Greek nun, and then using that as evidence for Paschal's 'Greekness', that seems unhelpful on every level. Whether artists had to leave Byzantium during Iconoclasm because there was no work is another dubious claim. Material from Byzantium (the cross in Hagia Eirene, the mosaics of Emperor Constantine V at the Blachernae church, and his mosaics with secular scenes of trees, birds, beasts, horse-races, hunts, the theatre and hippodrome, mentioned in an earlier chapter) makes it very clear that art and mosaic-making continued throughout the period of Iconoclasm: indeed, it was only figural religious art that the Iconoclasts objected to, not art per se. If artist-monks (and how many monks were artists is a question in itself) did escape to Rome, it was to escape persecution rather than to find work. Finally, turning the putative Byzantine Greek monks into mosaicists of the Zeno Chapel is equally unnecessary, founded, as it seems to be, on that familiar unarticulated trope of mosaic as a Byzantine medium. There is no reason to suspect that mosaic-making needed renewing in Rome, since mosaics had continued to be made there since the fourth century.

It is this assumption that mosaic was not made in Rome between the reigns of Pope John VII (705–7) and Leo III (795–816) that has led to the justification that mosaics from the time of Leo III and Paschal must have been the products of imported eastern artists who established their own workshops and passed on their skills to Roman craftsmen, whose attempts were of a lesser quality. But, as I hope this chapter and the previous one have shown, Paschal had no need for Byzantine mosaicists to make mosaics, nor to devise mosaic programmes, since Rome's own traditions and mosaicists were alive and kicking, and also clearly influential in the designs of his programmes. The evidence of the existence of mosaics throughout the late eighth and early ninth centuries – the Lateran Triclinium and Aula (*c.* 798–9), S. Susanna (795–9), possibly S. Maria Maggiore (809),[82] SS. Nereo ed Achilleo (815–16) – surely reflects a continued tradition of mosaic-making in Rome (at a lesser scale, certainly, than earlier) rather than its total rebirth. Furthermore, if the gaps in the Roman evidence indicate the need for the art to be redeveloped by fleeing artists from Constantinople, then the gaping holes in the material for mosaic-making in Constantinople implies that presumably that city in turn benefited from regular influxes of mosaicists to keep its industry alive. More widely, the introduction

by art historians of 'Byzantine artists' to Rome rather begs the question of why artists already in the city would have wanted to adapt their style to or assimilate it with that of the Byzantines. The implicit response, I suspect, relies on that unspoken and dubious assumption of Byzantine superiority.

The case for Paschal's Byzantine mosaicists is also hung around discussions of the techniques and iconography of the mosaics in S. Prassede and the Zeno Chapel. In technical terms, scholars are divided about the quality of these mosaics: the setting of the tesserae is supposedly quite rough and the mosaics lack technical sophistication. This is explained away by the mosaicists for the central apse and triumphal arch having been Roman whilst the supposedly more sophisticated mosaics of the Zeno Chapel were the work of the Greeks using it. However, the 'sophisticated' mosaics of the Zeno Chapel tend to be glass, which, by Nordhagen's reckoning of the use of stone and glass as signs of Byzantine or Roman artists respectively, would make them Roman rather than Byzantine.[83] In terms of the iconographic debates, the argument is also less than convincing. Elements of the iconography of the Zeno Chapel, specifically the use of the scene of the Anastasis, are claimed as 'Eastern' and the hierarchical layout of the programme is said to follow the precepts of the Second Council of Nikaea and to anticipate Middle Byzantine church decoration.[84] It is unfortunate therefore that the earliest examples of the Anastasis that survive are actually Western and that the scene was already well known in Rome, with one example surviving in S. Maria Antiqua (705–7) and another in the Oratory of John VII. Paschal or his artists would not have had to look far for a model, if they wanted one. Whilst the way in which scenes are used in the chapel (Christ in the roof vault; scenes from his life around the walls; saints) may find echoes in the Acts of the Council of Nikaea, it also replicates standard forms of the hierarchy of intercession, moving down from Christ, to his Mother and the saints, used widely throughout the Christian Mediterranean. That Middle Byzantine decoration may have followed this model may be the case, but the Zeno Chapel cannot easily both anticipate it and be influenced by it. Stylistically and iconographically, in fact, as I outlined above, the mosaics of the Zeno Chapel, and of S. Prassede, S. Cecilia and S. Maria in Domnica, owe a great deal to already existing mosaics in Rome.

The political and religious importance of Paschal's mosaics is unquestionable and much of their significance was surely derived from their visible relationship to the Early Christian papal mosaic past of Rome. Enough parallels are apparent with mosaics in Rome itself without the need to go so far away in time and space. Nevertheless, we should not discard the presence of Byzantium completely. Paschal, like many popes, saw himself as head of the church with the right to intervene in the East as he saw fit. In their self-proclaimed role as head of the Church, popes certainly responded to Iconoclasm and defended religious images.[85] The presence of 'Greek' monks, whatever that may mean, was a demonstration of the cosmopolitan nature of papal Rome and of the Pope's upholding of Christian orthodoxy, a theme which underpinned much of Paschal's building activity. But he did not need Byzantine artists to do this for him. Where a whiff of Byzantium was most useful was perhaps in his dealings with the Franks.[86] Paschal was treading a fine line between two powers, not an either/or situation, but one in which he manipulated and borrowed whatever he needed for his own ends, in art as in politics.

BYZANTIUM: AFTER ICONOCLASM

What then of the Byzantine Empire itself in this same period? The ninth and tenth centuries saw the end of Iconoclasm and

the fall-out from this, and these are themes that dominate what we know of mosaics in the empire. In the Byzantine East, the reigns of the Iconophile emperor Constantine VI and his mother Eirene (780–802) had been a pause in Iconoclasm. Emperor Leo V revived it in 815 and was supported by his successors. It was not until after the death of Theophilos (829–42) that the emperor's widow, Theodora, acting as regent for their son, Michael III, and her patriarch, brought the final end to Iconoclasm with the formal, and still-celebrated, Triumph of Orthodoxy in 843. Textual sources make it clear that Byzantine mosaicists were still active, as Iconoclast emperors of the ninth century were responsible for mosaics: Theophilos, for example, decorated several parts of the Great Palace with mosaic, including gold mosaic, trees, and figures picking fruit.[87] But the ninth-century mosaics that survive from the empire are all religious and all make reference to the conflict around religious images. The apse of the Church of the Dormition in Nikaea is one of the most eloquent witnesses of the Triumph of Orthodoxy. We have already come across this church (destroyed by fire in 1922) in the seventh century and seen how its apse was given a huge cross during Iconoclasm, replacing what had previously been there. At some point after 843, and we cannot be sure when, this cross was replaced by an image of the Mother of God holding her Child (see Fig. 103). Above her, left from the original pre-Iconoclastic mosaic, were three rays of light, pink, grey and green, emerging from three bands of blue, dark to light from outside in, with the Hand of God at the centre. In the vault of the bema was a backless throne supporting an empty book above which was a dove set against a cross from which seven rays of light came out. On either side of the vault were two archangels holding banners with the Trisagion and identified by inscription as representatives of the four angelic orders. Below them was another inscription, and a further inscription between the wings of the southern angels identified Naukratios as the restorer of the images.[88] Because we can still see the outline of the cross and possibly traces even of the first image in the apse, this mosaic served as a vivid evocation of Iconoclasm and of the Triumph of Orthodoxy. That these marks remain visible may have been a deliberate move: as suggested in the first part of this book, capable mosaicists are skilful enough to cover their tracks, and this perhaps represents an unwillingness to obliterate the cross completely, a symbol significant to both parties in the dispute.

HAGIA SOPHIA, CONSTANTINOPLE

In Hagia Sophia, figural mosaics in public areas of the church – the apse and tympana – celebrate Iconophile triumph, as do those in the so-called Vestibule and Room above the Ramp, ceremonial rooms of the patriarchal palace in the south-west cormer of the building opening onto the west gallery. There is no earlier evidence from Hagia Sophia for figural mosaics or for changes to the mosaic scheme, except in those ceremonial rooms of the patriarchal palace, which were installed in the reign of Justin II (565–78) and altered by Iconoclasts in the seventh century. But in the ninth century, the whole effect of the interior altered with the addition of figural compositions in vaults and on walls. One of the most celebrated of all Byzantine mosaics is the image of the Mother of God, enthroned and holding her Christ-Child, in the apse of the church (see Figs. 13 and 26). This is almost certainly the image whose inauguration was celebrated by the patriarch, Photios, in a homily delivered in Hagia Sophia on 29 March 867.[89] It was the first image to be placed in the building after the Triumph of Orthodoxy and the end of Iconoclasm.

Mary and her Child in the apse form a monumental composition – she is 4.39 metres

high; he is 1.99 metres – set some 30 metres up from the floor of the church. She is enthroned and has the Child on her lap in the centre of the apse. One hand is on his shoulder, the other holds a handkerchief. He looks boldly outwards, right hand raised in blessing, left holding a scroll. The figures are set on a gold background, not quite solid as intermixed with silver tesserae and reversed tesserae which give the surface some life. Two archangels were originally located one either side of the apse on the soffit of the bema arch. On the left hand of the Mother and Child – the viewer's right – is the figure of Gabriel, 4.9 metres tall, in buskins, tunic and chlamys, hair piled high and lips pursed, holding a staff in one hand and a globe in the other (see Fig. 4). His left shoulder, part of his halo, the upper part of both wings and the top of the staff have been destroyed. On the other side, all that remains of Michael are a few feathers, part of a foot, the base of a staff, and a fragment of halo, enough to suggest that he looked the same, more or less, as Gabriel. Around the rim of the apse, an inscription recorded that 'The images which the imposters/heretics had formerly cast down here, pious emperors have set up again.'[90] This seems a clear reference to Iconoclasm and its aftermath, making the pious emperors Michael III and Basil I (866–867), though there is no real evidence in the archaeology of the apse mosaics to suggest that there ever was an earlier figural (or necessarily any) image in the apse itself for the Iconoclasts to remove.

The image had a political and theological resonance, for it fitted Iconophile theology and thus Iconophile victory. The Incarnation of Christ in human form was a major justification for the existence of his representation: he could be shown as a man since he had taken this form whilst on earth. The image of the human Mother of God and her Son, in his full humanity and divinity, was one that had played a part in Christological debates about the nature of Christ from early on. As well as displaying Christ's humanity and divinity, and his visibility, it showed the uniting of Mary's being, as human but also as God-Bearer, *Theotokos*, an issue hotly debated in the fifth century. Photios' homily forced these points home: the emperors had set an example of 'superhuman love, whose preoccupation is Orthodoxy' and 'with such a welcome does the representation of the Virgin's form greet us' for she 'carries in her pure arms, for the common salvation of our kind, the common Creator reclining as an infant – that great and ineffable mystery'. 'Christ came to us in the flesh, and was borne in the arms of his Mother. This is seen and confirmed and proclaimed in pictures, the teaching made manifest by means of personal eyewitness and impelling the spectators to unhesitating assent.'[91] However, images of the Mother of God and her Child were not unique to the period after Iconoclasm. We have already seen the pair used in mosaic in the sixth and seventh centuries in Cyprus (Lythrankomi and Kiti), at Poreč, and even in Rome (S. Maria Maggiore, albeit in a different format; S. Maria in Domnica); it was an image also found in a variety of other media before the ninth century.

There has been some debate as to whether the mosaic in the apse of Hagia Sophia really was that described by Photios. Because the patriarch described the image as a standing model and it is so clearly a seated figure, at least when looked at in a close-up photograph, it has been suggested that this mosaic either replaced (perhaps in the eighth century, perhaps as late as the fourteenth) what Photios described, or that he was describing an icon in the apse.[92] However, leaving aside the question of whether an icon would have had the same impact on its audience in the church as a monumental mosaic (how many of the congregation would have been able to see an icon?), the archaeology of the mosaic seems to indicate that this image and the inscription are of a piece and that, stratigraphically, both can be confidently

dated to the ninth century.[93] Moreover, when viewed from the floor of the church – which is where Photios and his audience would have been – the position of the Mother of God and the question of whether she is seated or standing is not at all obvious. What both the image of the Mother of God and Child and the tympana Fathers really reveal is the potential difficulty of putting figural images into Hagia Sophia. The wall surfaces are too large and too disproportionate to allow figures to be seen at any real scale.

Like Mary and Christ, these mosaics of the Church Fathers in the tympana below the central dome also reflected the Triumph of Orthodoxy. Although there were originally fourteen images of selected Church Fathers, seven on each side, only four have been uncovered, all in the north tympanum.[94] These are (Fig. 118) Ignatios the Younger (Iconophile patriarch of Constantinople), Ignatios Theophoros, John Chrysostom and Athanasios. Above the Fathers were four major prophets, Isaiah and probably Daniel in the south tympanum; Ezekiel and Jeremiah in the north. Twelve minor prophets on a smaller scale, including Habakkuk and Jonah, were placed between the windows. Four monograms were placed in four medallions below the four major prophets: the one that would have contained the emperor's name has, of course, gone. All the Fathers are Eastern bishops and eight were figures associated with the liturgy of Hagia Sophia, so they were clearly selected as relevant to the building. Ignatios the Younger and Methodios were both figures who had been sanctified for their opposition to Iconoclasm. Ignatios died in 877, so the mosaics must postdate this, and this date together with the emphasis on the Triumph of Orthodoxy implies that the tympana mosaics were the work of the Emperor Basil again, perhaps with the support of the Patriarch Photios (who had



Figure 118 Ignatios the Younger, north tympanum, Hagia Sophia, Istanbul, ninth century. Ignatios was seen as a saint for his opposition to Iconoclasm.



Figure 119 The Deesis, north tympanum, the Room above the Vestibule, Hagia Sophia, Istanbul, ninth century. Christ enthroned and Mary to his left remain; the third, right-hand side figure has almost completely vanished but is conjectured to have been John the Baptist. Much of the gold background has been lost, but the paint of the setting bed is still visible. A vertical line can be traced in the plaster between the three figures, suggesting the mosaic was set in three parts.

recognised Ignatios as a saint between 877 and 886), and date to the 880s to 890s.[95] A major earthquake in 869 had severely damaged the church and Basil had been responsible for the repairs, including a mosaic of the Mother of God and her Child, with Peter and Paul, on the western arch. Conceivably, these tympana mosaics formed a part of the same repairs.

A suite of rooms at the south end of the west gallery of Hagia Sophia, above the western entrance vestibule of the church, which were a part of the patriarchal palace, contains further fragmentary mosaics representative of the Triumph of Orthodoxy. The main room, a large vaulted chamber (sometimes known as the 'Room over the Vestibule'), contains a cycle of figures from the Old and New Testaments and from Orthodox church history, apostles, saints (including the Emperor Constantine the Great) and patriarchs of Constantinople, perhaps thirty-six in all, the largest group of figures in the church.[96] This community of saints was grouped around the vault of the room and a focus was provided by a semi-circular panel over the door into the gallery. Here, Christ is shown enthroned between Mary and John the Baptist, the so-called Deesis schema (Fig. 119). This cycle appears to have been carefully selected to support the Iconophile belief in the legitimacy of icons of Christ and the saints. The figures depicted are those who witnessed God in human form, or who were historical patriarchs of Hagia Sophia who had fought (and suffered) for the Iconophile victory. They also form a timeless congregation within the church to encourage the patriarch of the day, who may have been Photios' predecessor and rival Ignatios.[97] Also part of the same set of rooms, the high square 'Room over the Ramp' and the small square 'Alcove' lie beyond the Room over the Vestibule. The Room over the

Ramp contains great deal of decorative ornament, and was noted in the previous chapter as having been interfered with during Iconoclasm, though not then altered a second time.[98] The Alcove has vine rinceaux and other decorative elements, along with medallions which contain and always contained crosses. These images may be ninth century.[99]

The decoration of the rooms reflects something of the events of Iconoclasm, but it also relates to the function of the spaces. They are identified with the *Sekreta*, a term used of both the patriarch's Council and its meeting place. The Room over the Vestibule may have been the space known as the Large *Sekreton*, a meeting place for ecclesiastical committees; if the Room over the Vestibule was this room, then its decoration with images about the Triumph of Orthodoxy was apposite. The Small *Sekreton* housed relics of the True Cross; if the Room above the Ramp was that, then this explains its decoration with crosses. The mosaics of the patriarchal rooms have been linked to the cupola mosaics of Thessaloniki, dated to the 880s and said to have been done by Constantinopolitan mosaicists brought in by Archbishop Paul, a supporter of Photios, presumably after they had finished in Hagia Sophia.[100]

The mosaics in Hagia Sophia raise some interesting questions about resources. In the apse, the lavish gold background, interspersed with silver tesserae, does not suggest a shortage of money or materials, though it is worth noting that the shoes of the Mother of God are made from more red-painted tesserae than red glass ones. But in the tympana Fathers, it has been suggested that economies can be detected. There are fewer glass tesserae and a scarcity of red, silver and blue.[101] The workmanship has been characterised as 'untidy': geometric motifs in the borders can be uneven and lopsided and the figural panels are unfinished at the bottom. In the patriarchal rooms, reds, golds and silvers are all found in the ninth-century mosaics of the largest room, where the mosaics are said to be of the 'best quality'. At some point, gold tesserae were carefully removed, presumably for reuse, from these mosaics, but we have no idea when. The mosaics of the Alcove, in contrast, have been described as 'economical in materials and coarse in execution'.[102] In a mosaic depicting Christ and an emperor in the narthex of the church, though gold, silver and red are used, red-painted tesserae are also in evidence (the emperor's footwear, for example).[103] Much of this has been seen as the result of problems in the supply of tesserae rather than stylistic factors, notably a shortage of tesserae in the ninth century. This is evidenced by the *Patria*'s account of Basil I taking tesserae from Justinian's mausoleum at the church of the Holy Apostles to reuse at the Nea Ekklesia and at the church of the Mother of God in the Forum. The *Patria*'s suggestion of recycling may indicate a lack of new materials for mosaic in Constantinople in the ninth century, but it may also suggest the use of what was to hand, as with Rome; the account of Basil's use of mosaic intimates that, if there was a reuse, it was on a large scale.[104] But why there should have been a dearth of materials in Constantinople is unclear (unless, of course, they had all been sent to the Islamic world in the eighth century, for the mosques there); if indeed this was the case, it implies a problem with the supply of glass as much as an economic crisis; it might also suggest that the Byzantines did not make their own glass or tesserae and the supply to them was interrupted. Another take on this might be that time was of the essence and that the intention was to get the Iconoclast images down and replaced as quickly as possible so that what was used was what was to hand.

The inscription in the apse indicates that the emperors were, at least in public, the moving forces and the financial muscle behind the mosaics in Hagia Sophia. However, it seems



Figure 120 Narthex mosaic, above the west door, Hagia Sophia, Istanbul, ninth century, showing an unnamed emperor on his knees before Christ. This view, with the corners of the great west doors of the church visible to either side of the photograph, is what the panel looks like from the floor of the church.

likely that the Patriarch Photios also played a part, perhaps as the theological weight behind the concept. As patriarch at the time, Photios must have had a role in the scheme of decoration within the church. The choice of Mary and her Child in the apse may indicate plans for more figural images throughout the church, including the dome, where, hierarchically, Christ could be installed.[105] In the Rooms, however, patriarchal influence is apparent in the decoration of Hagia Sophia. But whether imperial or ecclesiastical, the mosaics in Hagia Sophia were a definitive public statement of the victory of religious images and of their power.

One further mosaic panel survives from the ninth century. This is a relatively small lunette above the central door from the narthex into the nave of the church (Fig. 120), which presumably replaced an earlier Justinianic panel. It shows an unnamed emperor prostrating himself in front of an enthroned Christ. Christ blesses with his right hand and holds an open book in his left, a volume bearing the text 'Peace unto you. I am the light of the world.'[106] Either side of Christ are two busts in medallions. To the viewer's left, a woman in blue robes, presumably the Mother of God, extends her hands in a gesture of prayer and intercession; on the right is an angel holding a sceptre.

The lack of identity of the emperor has formed the basis of almost all scholarly discussion of the panel.[107] In terms of its style, the mosaic is dated – and this has never really been disputed – to the mid to late ninth century. Consequently, the emperor depicted, if the image was 'meant' as a specific person, would have been either Basil I or his son, Leo VI. The emperor's pose has been seen as one of penitence and the angel's expression as one of judgement; along this line of interpretation, the career of either emperor offers possibilities for imperial submission. Basil murdered his co-emperor Michael III; Leo married

four times, a sin of 'beastly polygamy' and a 'way of living befitting swine'.[108] However, whether any emperor would consent to be represented as penitent in such a significant place in the church (the door is the ceremonial door used by emperors to enter the nave) and who would have had the ability to punish an emperor like this are moot points. Those who see this as an image of a specific emperor being punished for a specific sin suggest that the patriarch would have had this authority, in which case the image represents less the penitence of an emperor and more the triumph of the patriarch over the emperor. Despite this, there is no definitive reason why the image should be seen as one of abject penitence for a particular sin. The image of an emperor, any and every emperor, humble before God on behalf of his people, and yet in the presence of God and blessed by God, at this location served as a reminder both to the emperor of his role and to those around him of the emperor's place as vice-regent to God – as with Pope Paschal at the feet of Mary in S. Maria in Domnica. The inscription to either side of Christ's head, IC XC, *Iesus Christos* in Greek, is a later insertion into the mosaic and it is perhaps typical of Byzantine imagery that the label is attached to the only figure who can be definitively identified without one.[109]

The ninth and tenth centuries seem to have been a good time for mosaics in Constantinople. For the ninth century, the evidence is largely textual. Written sources record that mosaics were added to Hagia Sophia. A mosaic bust of Christ was portrayed in mosaic in the east vault of the central bay of the south gallery, for example.[110] We also know of at least eight further churches in Constantinople built by Basil I and his successor Leo VI that contained mosaic.[111] In Basil's Church of the Pharos, inaugurated in 880, there was gold mosaic, Christ on the ceiling (probably the dome), the Virgin in the apse, angels, prophets and saints throughout the church; in Basil's Nea Ekklesia and Church of the Prophet Elijah, there was more gold mosaic. In the Kainourgion, a part of his palace, Basil placed a mosaic of himself, escorted by his victorious generals, offering him the towns they had captured, and scenes of others of his deeds; in the bedchamber was another mosaic of the emperor and his wife enthroned and flanked by their children. At the Pege, the Mother of God saved the mosaicists as their ladders collapsed, though the text does not tell us what they were in the process of installing. The *Life of Basil* records the emperor's work of foundation and restoration on a great number of churches and, as with the *Liber Pontificalis*, we can only guess as to how many of these contained mosaic. Later in the same century, two sermons of the Emperor Leo VI record mosaics in two churches founded by the patriarch of Constantinople and the emperor's own father-in-law respectively. In the church built by Patriarch Antony II Kauleas (893–901), Christ is shown in the roof, and the Mother of God and Child are present somewhere, as are further scenes of saintly figures. In the church built by Stylianos Zaoutzes (after 886 and before *c.* 893), Christ is shown at the summit (probably the central main dome) of the church, surrounded by angels, prophets and Old Testament kings, and scenes from the life of Christ. The Church of the Holy Apostles clearly contained mosaics of Christ and the Mother of God and scenes from Christ's life, for we have a tenth-century description of them, but whether those mosaics were sixth, ninth or tenth century is unknown. Additionally, at the Stoudios Monastery, a quantity of tesserae was found in the apse area of the church; these, put next to John Geometres' 57-line account of the church, which mentions mosaic, suggests it might have held a *Maiestas Domini*, perhaps datable to the ninth century.[112]

The nature of the literary descriptions is partial and biased. Some are drawn from homilies, where

the primary interest is not in giving the reader or auditor a full description of the mosaic programme of the church but in creating a sense of the building as a sacred space and making particular theological points within the homily, where the mosaics are, at best, secondary to making those arguments. The churches cited in the *Life of Basil*, for example, were chosen to extol the emperor as a pious church-builder (rather than a murderous thug who dispatched his predecessor). In other words, the inherent motives for using mosaics in these buildings are nothing new: politics; piety; display; authority. Nevertheless, several additional conclusions can be drawn from the texts. The considerable quantity of mosaic made in this period is noteworthy, even if we are unsure how to interpret that amount. The types of scenes that the authors describe – images of the life of Christ, images of holy figures, representations of emperors – are not wildly different from scenes before Iconoclasm and from those put into Hagia Sophia. They differ from Roman mosaics because of the architecture: these Constantinopolitan churches appear to be domed rather than basilical and the dome is used for Christ in his glory, leaving the apse free for other images. But the Mother of God in the apse is known from the fifth (Chalkoprateia, S. Maria in Capua Vetere) and sixth (the three surviving Cypriot mosaics – if they do indeed all belong to this time) centuries. Saints and Old Testament references are no surprise, found in mosaics from the fourth century on. The very full programme of scenes from the life of Christ at Zaoutzes' church is different from anything surviving in mosaic, but not from anything surviving in paint. And scenes from Christ's life in mosaic and paint are known from Rome and Naples in the fourth century, from Nola and Ravenna in the fifth century; scenes of images of the saints from almost everywhere. It is hard to be sure how different mosaic programmes were 'before' and 'after' Iconoclasm.

We can also note the presence of two non-imperial patrons in these Constantinopolitan churches, Kauleas and Zaoutzes, though both were clearly of very high status. No images of patrons, so important in the Roman churches, are mentioned in any of these accounts. This does not prove that the patron was not depicted, of course, merely that his presence did not need noting here. In the Kainourgion mosaics, which are examples of secular, imperial art, the patron – the emperor – is very much present: in one room with his victorious generals, in another with his wife and children, offering prayers.[113] And in Hagia Sophia, the surviving imperial mosaics make very similar points. I would guess that such secular mosaics, which relate to images from the sixth century (Justinian in the Chalke) and earlier (Roman images), continued to be made certainly in Constantinople and probably in Italy when there was an emperor, before being replaced by images of the pope. We have already looked at one of the imperial panels in Hagia Sophia, that of an emperor on his knees before Christ. Two further imperial panels date to this ninth- to tenth-century period, one in the north gallery and one over the door from the south-west vestibule.

That in the north gallery shows the Emperor Alexander, identified by an inscription.[114] Consequently it can be dated almost certainly to the period 912–13, the period of Alexander's sole rule. It is rather oddly located and easy to miss, being tucked away in the north gallery of the church on the eastern face of the north-western pier in the tall, narrow tympanum that forms the western termination of the barrel vault between the two northern piers of the north gallery (Fig. 121). The panel is 3.1 metres high and 1.5 metres wide, whilst the emperor is 2.37 metres tall. Alexander, shown as a man of mature years, stands alone in this tight space. Fully frontal, in his full imperial regalia, holding the sceptre and *akakion*, he stares out at the



Figure 121 The awkwardly placed and difficult-to-see mosaic of the Emperor Alexander, in the north gallery, Hagia Sophia, Istanbul, ninth century.

viewer. Four inscribed discs, two on each side, give his name and title and a prayer: 'Lord, help your servant, the orthodox and faithful emperor.' It is unusual for such a figure to be shown alone, but the space is perhaps too narrow to permit another figure to be included alongside the emperor. Why the image is located here is unknown; the space itself is confined and discreet.

The other panel is the image in the lunette above the south-west vestibule door (Fig. 122).[115] It depicts an enthroned Mary with her Child in the centre. To the viewer's left (their right) is the Emperor Justinian with a model of Hagia Sophia; to our right is Constantine the Great with a model of a walled town, which must be Constantinople. Both men wear imperial clothing that looks late ninth/early tenth century; both are identified by inscriptions. Either side of the Mother and Child is the Greek inscription 'Mother of God' in roundels. The panel cannot be dated precisely but is felt in terms of style and costume to be late ninth or early tenth century, though the patron is unknown. It is more than likely that he was an emperor and that, in choosing to depict two of the great emperors of the past, he was also allying himself to these pious heroes.[116] The message it gives is clear: both city and church are imperial and under God's protection, and the choice of the Mother of God may have Iconophile resonances.

The three imperial panels of the ninth and tenth centuries belong to emperors of the Macedonian dynasty, in power between 867 until 1056: one more mosaic in the church, the depiction of Zoe and Constantine IX in the south gallery, dating to the eleventh century, is also



Figure 122 Two great emperors of the past, Justinian, builder of the church, and Constantine, founder of the city, make offerings to Christ and his Mother: panel in the south-west vestibule, Hagia Sophia, Istanbul, ninth century.

associated with this family. There are several intriguing issues about these mosaics. Of the three ninth- and tenth-century examples, only one is associated with a specific, named emperor of the dynasty, that showing Alexander. One of the other two images shows an anonymous emperor; the other, two of the great founder-emperors of the state. So, in some ways, the panels say as much about 'emperors' and imperial power as they do about specific patrons. It is possible that they replaced earlier figural images in the same locations, but equally and perhaps more likely that they could have replaced earlier non-figural Justinianic mosaics. There is little to suggest that other earlier emperors had images in mosaic in the church that have now been lost and so these three images present a deliberate, not always overt, colonisation of the building by the Macedonians; this may relate to assertions of their legitimacy and may also play into trends current at the time and visible in the literature for associating the Macedonians with great emperors of the past.[117]

BEYOND CONSTANTINOPLE

Outside the capital, only the dome mosaic of Hagia Sophia, Thessaloniki, survives as a ninth-century mosaic still in situ (and even this

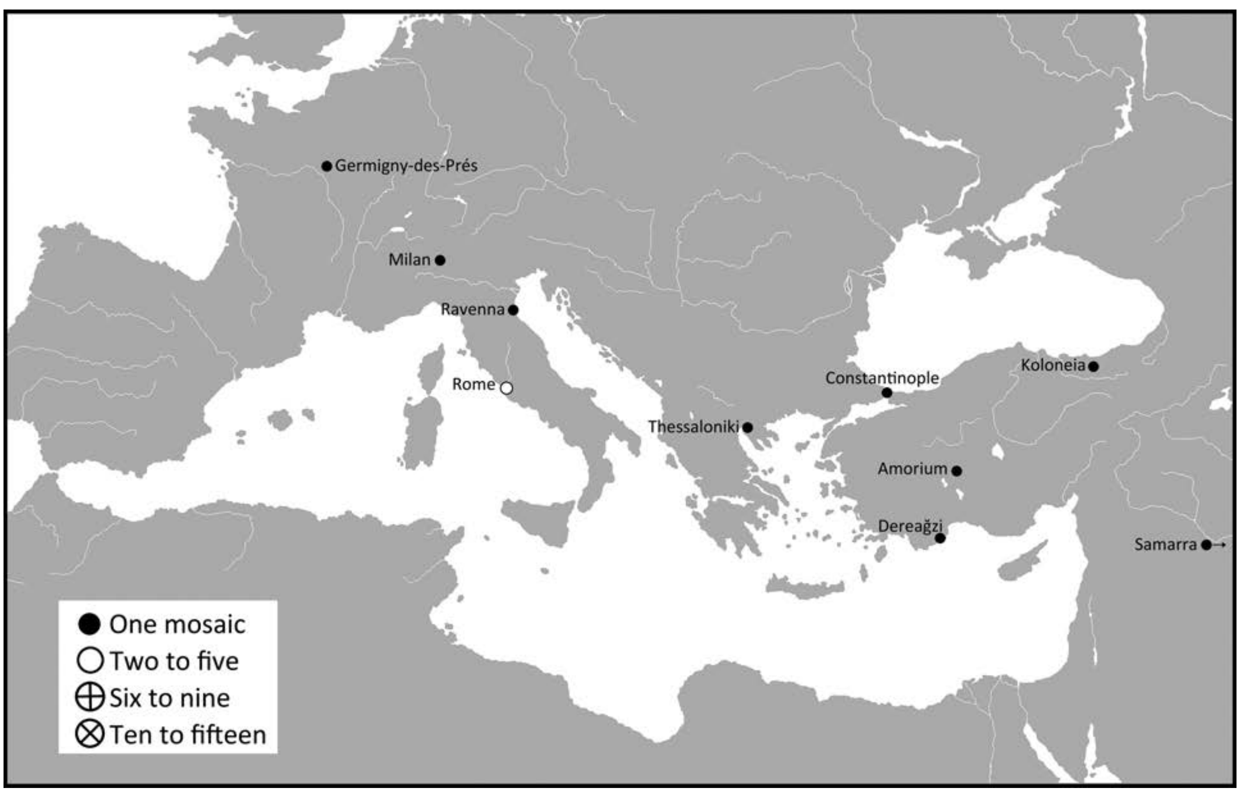


Figure 123 The Ascension, central dome, Hagia Sophia, Thessaloniki, ninth century.

date is not totally certain). This mosaic shows the Ascension (Fig. 123). Against a gold background, a full-length Christ, seated on a rainbow, is held aloft in a mandorla by two angels. Below him stands the Mother of God, her hands held out in prayer, flanked by two more angels. Above their heads is the text of the angel's words at the Ascension, taken from the Acts of the Apostles. Around them the twelve apostles are assembled in poses of awe and wonder. The differentiation of the figures, the sense of movement associated with the image and the correct scaling of the figures – from close to, they seem over-long, but from the floor of the church, they work well – highlight the technical skills of the mosaicists. Gorgeous stylised trees and a rocky landscape with a strong resemblance to *millefiori* glass (or boiled sweets, depending on your mind-set) complete the image. There is a plant and fruit scroll relief and two inscriptions with a date or part of a date. Debate has raged over whether or not the date is complete and, unhelpfully, it is possible to reconstruct it as a ninth-century or an eleventh-century one.[118] One widely accepted version makes it out as 885, when the archbishop of Thessaloniki was Paul, a friend of the Patriarch Photios, the suggestion being that he would make a plausible patron for the church and the mosaic. But what it replaced in the dome and why is simply not known.[119] Perhaps what we see is an individual church adopting imagery to suit its needs and wishes. Certainly small details within the scene, such as the presence of St Andrew as second to St Paul, rather than Peter as first-ranked, may be the result of local choice, Paul being the Apostle to Thessaloniki and Andrew, the first-called, believed to have been the Apostle who founded the Eastern Church.[120]

Other than at Thessaloniki and the evidence from Nikaea, no ninth- or tenth-century mosaics survive on the walls in the empire. However, as Maps 6 and 7 show, fragments of wall mosaics have been found at Amorium, Koloneia (evidenced through scattered glass tesserae) and Dereağzi in Lycia, where fragments of mosaic were discovered.[121] Amorium and Koloneia were both cities of some importance. Amorium had a key strategic location on the main route south, was capital of the theme of Anatolikon in the seventh century, a bishopric and a wealthy town; Koloneia in the Pontos was a military stronghold on the main route east.[122] Dereağzi indicates an alternative form of patronage: it appears to have been a wealthy monastic site with a small settlement, clearly the foundation of a wealthy patron, of someone able to bring artists and materials to the site.[123] These sites together are suggestive of a possible widespread use of mosaic as a medium in cities throughout the empire. In Constantinople itself, further evidence for new tenth-century mosaics comes in the shape of tesserae found in several buildings: at a church at the Chalke Gate; at the church built by Constantine Lips (known now as Fenari Isa Camii); at the Myrelaion Church (the Bodrum Camii) built by Emperor Romanos Lekapenos; at Atık Mustafa Pasha Camii (which church this was is unknown); and at the Bukoleon Palace.[124]

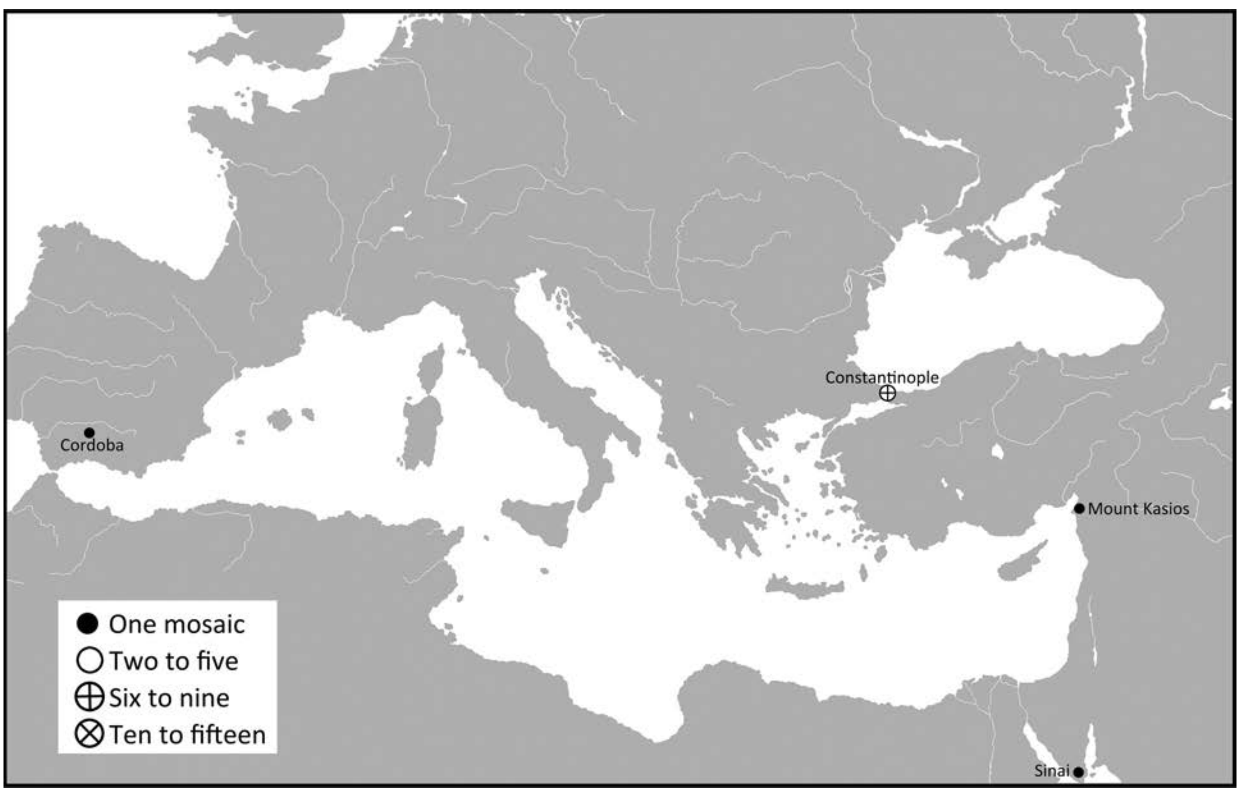
Map 6 suggests a similar level of mosaic-making in the ninth century as in the eighth, recording seventeen new mosaics and repairs to mosaics at Ravenna and Milan. Five are located in Rome. Counting the Hagia Sophia panels separately, seven new examples of mosaics come from the Byzantine Empire, mostly from Constantinople. To the west, there is that unique example from France at Germigny-des-Prés; to the east, the Abbasid palace at Samarra, built at



Map 6 New wall mosaics in the ninth century.

the time of the foundation of the city in 836.[125] Textual sources outweigh the actual remains. They record at least another twenty-eight mosaics, fourteen more churches with ninth-century mosaics in Constantinople, another eight in Rome, a couple more in the Carolingian West, and four from the Islamic world.

The map of tenth-century new mosaics (Map 7) records ten new mosaics. None is Italian. Eight come from the Byzantine Empire. In the Islamic world, evidence for a probable wall mosaic comes from excavations of the site of the Monastery of St Barlaam on Mount Kasios, near Antioch, suggesting that the medium was again not limited to buildings inside the great cities – and that Christians in the region continued to fund and be allowed to fund such work. Another Islamic mosaic is that of the Great Mosque in Cordoba, built in the eighth century but mosaicked in the tenth. At Sinai, the small mosaic in the Chapel of the Burning Bush is conventionally dated to the ninth/tenth century. It is hard to date – in part because it is almost impossible to see as access to the chapel is limited and the mosaic is in a steep, low conch behind an altar table – and it has never been properly examined (Fig. 124). It depicts a roundel with a cross with flared ends on a blue background, set into a gold background.[126] The cross has led to the assumption that this must relate in some way to Iconoclasm, though this seems unlikely. If it is a tenth-century mosaic, then this is a Christian mosaic placed in a Christian monastery in Islamic territory. Abu al-Makarim, whose text probably dates to the early thirteenth century, mentions various other such mosaics that may fall into this ninth/tenth-century period: he noted that in 1010 al-Hakam destroyed the church and mosaics of the Church of the Apostles at



Map 7 New wall mosaics in the tenth century.



Figure 124 The aniconic mosaic in the apse of the Chapel of the Burning Bush, St Catherine's Church, Mount Sinai, tenth century.

al-Kusair, a monastery founded perhaps in 802–4; the same fate befell the Church of S. Pachomios at Fa'u (Bafu) in Upper Egypt.[127]

As with the ninth century, written sources enable us to expand this picture. In addition to those sources which mention already-noted mosaics, six further new tenth-century mosaics can be added to the mix. Four are Constantinopolitan: in the Chrysotriklinos Palace, the imperial palace and another unnamed palace, together once again with the possible tenth-century mosaics of the Church of the Holy Apostles. There was also a tenth-century rebuilding of the dome of Hagia Sophia. Evidence for another mosaic comes from Rus′, from Kiev and the Church of the Tithes (also known as the Church of the Dormition of the Virgin or Desyattinaya Church), dated to 989–96. Another comes from the Islamic world: the central dome of the *Dar al-khulafa* (Chamber of the Caliphs) or *majlis al-dhahabi* (Golden Reception Hall) of the al-Zahra Palace in Cordoba was mosaicked in silver and gold.[128]

In Byzantium, the early and mid-ninth-century mosaics suggest a playing out of issues around Iconoclasm, signals of the Triumph of Orthodoxy at both a religious and a political level. The Mother of God and Child in Hagia Sophia and Nikaea, the images in the Patriarchal Rooms in Hagia Sophia, reflect this and yet the image of the Mother of God and Child as a symbol of the

Incarnation is one we have seen much earlier also: it is not new in its meaning. We also get a sense for the first time in Constantinople of cycles of Christian images. Aside from religious images, actual evidence in this ninth- to tenth-century period exists for imperial mosaics, rather than written accounts of them, and significantly they are located in Hagia Sophia, the Great Church. These imperial images make statements about dynasty and power, the emperor's relationship with God, the imperial protection of the city. Were these images meant to speak to the outside world or were they inward-looking? The messages of many of the new mosaics in Hagia Sophia seem at first sight to reflect internal Byzantine concerns, about God, about the emperors' power. None the less, mosaics on this scale in this church can only have impressed visitors to the city and it was these post-Iconoclastic figural mosaics, combined with the Justinianic gold in Hagia Sophia, that so impressed Khan Vladimir's envoys to Constantinople in 988: as angels seemed to descend from the mosaics to join in the celebration of the liturgy, 'we knew not whether we were in heaven or on earth. For on earth there is no such splendour or such beauty and we are at a loss how to describe it. We only know that God dwells there among men.'[129]

In Rome, mosaics were still associated firmly with popes and papal claims. From the ninth century in particular, several major apse programmes survive, continuing to emphasise themes of salvation, the Second Coming and papal authority. Mosaic was used to make a statement about the pope's relationship with a new earthly power, that of the Carolingians – and by the Carolingians to show that they had arrived. In both East and West, mosaic was still a medium for expressing the Christian faith and, almost certainly in both Rome and the Eastern Roman Empire, continued to be used because of its ancient heritage as Roman and Christian.

In East and West, the number of mosaics made appears to have slowed and the distribution of mosaics is certainly less. Mosaics in the Levant seem to have dried up completely, and this may be another pointer in the argument that the Arab invasions of the seventh century did not cause dearth, confusion and collapse in the area, but that the economic downturn was later. Coupled to this, the drop-off in mosaics in the ninth and tenth centuries in the region may be associated with ninth-century cultural developments in the area and the presence of fewer Christians and fewer new churches. It may also have been associated with availability of raw materials. This is the period of transition from natron to plant ash glass and that may have affected supplies of raw glass for a time; it is certainly a point where the evidence for the reuse of tesserae is, for whatever reason, more apparent than before or after, both in Byzantium and in the West. The survival patterns from Rome and Constantinople raise methodological problems. There is little evidence for mosaics in Constantinople until the ninth century, but we assume mosaics were there and some believe that Constantinople was the dominant mosaic-producing force of the Mediterranean world. If the ninth-century mosaics that survive in Constantinople are the tip of the iceberg – and the written sources suggest that they are – then a huge amount has vanished. But it is only reasonable to apply the same standards to Rome, where mosaics survive until the mid-ninth and tenth centuries, but the decrease is no more proof that they were no longer made than it is for Constantinople.

I began this chapter with a very early ninth-century mosaic, Germigny-des-Prés, which owed much to the existence of mosaics in Rome and the spirit of emulation. I end it with a late tenth-century mosaic that owes its existence to similar motives in the Islamic world. After the glory days of the late seventh and eighth centuries, few traces of ninth- and tenth-century Islamic

mosaics survive, though this may say more about the nature of excavations in the region and the accessibility of Arab sources to Western audiences. Certainly tesserae, including gold tesserae, are known from the palace complexes of Samarra in modern Iraq, the Abbasid capital from 836 until 892, and it seems unlikely that Samarra was alone (though I doubt we shall ever know now what was in Baghdad). The Abbasids also placed mosaic on gates of the Masjid al-Haram in Mecca.[130] But in Cordoba, in Spain, in the Islamic Umayyad kingdom, the Caliph al-Hakam II (961–76) expanded the Great Mosque between 961 and 976, adding mosaics to it in deliberate imitation of the Umayyad Great Mosque of Damascus. It is also possible that there was gold and silver mosaic in the palace of al-Zahra in Cordoba, though no conclusive evidence survives. Tenth-century Cordoba itself was no mean city; it was an intellectual centre, one bigger than Paris, and a focus for arts and crafts.[131]

The Cordoba Great Mosque had originally been built by ʻAbd al-Rahman in the eighth century when the Umayyads had fled Syria for Spain, and it held a significant symbolic place in the ideology of the al-Andalus caliphate. Al-Hakam extended it by twelve bays, and added a rich decorative programme of marbles, stucco and mosaic. The mosaics are in the qibla, and are mainly gold and shades of green and blue, though reds, purples and yellows are also present. Unlike Damascus, there are no representations, just geometric and floral patterns into which inscriptions, gold Kufic lettering on a blue background, are inserted and sometimes lost.[132]

Evocations of the Great Mosque of Damascus, and indeed of the Dome of the Rock and the Great Mosque in Medina, the other major building projects of the earlier Umayyad caliphate, were always apparent in Cordoba. Like the Great Mosque of Damascus, the Cordoba mosque was said to have been built on the site of a major church, and enlargements of the mosque made sure they followed its original proportions.[133] The parallels with the Great Mosque in Damascus – even to the point of its being old-fashioned by the tenth century – underline a fierce, near-obsessive dependence on the Umayyad heritage of Syria which characterised Muslim al-Andalus for centuries: ʻAbd al-Rahman had been an invader in Spain, a stranger in a strange land, fleeing from Syria and desperate to hold on to his Umayyad heritage. But the mosque also made reference to local elements and to Jerusalem, both the al-Aqsa and the Dome of the Rock, in the use of mosaic. Only two medieval mosques in the Islamic world survive that are bigger than that of Cordoba: Samarra and Rabat.

There seems to have been a local production of glass in Islamic Spain, though its history is only now being explored, with glassmakers having been introduced rather than glass imported.[134] However, the mosaicists for the Great Mosque (and the al-Zahra) must have come from somewhere other than al-Andalus, just as those for Germigny-des-Prés are unlikely to have been Frankish. With the Cordoba mosaics, the question of 'Byzantine' mosaicists in an Islamic setting therefore recurs once more. Al-Idrisi (twelfth century) described the qibla of the Great Mosque as covered in mosaic by al-Rahman and the mosaic as sent by Constantine VII.[135] By the fourteenth century, according to Ibn Idhari (writing in *c.* 1312), these mosaics had become the work of Byzantine craftsmen, sent by the emperor (who would have been Nikephoros Phokas), along with 320 qintar of tesserae, in response to al-Hakam's command 'in emulation of what al-Walid had done when constructing the mosque of Damascus'.[136] Ibn Idhari's story has another twist: a Byzantine master came with the tesserae and taught Mamluk apprentices and slaves to do the work to the point that they surpassed the master, who left. Was this a bid to make it

sound as if the infidels had relatively little to do with the mosaics? If the story were true, that mosaic school has left no trace of any further existence.

At Germigny, Theodulf's aim seems to have been to imitate what he saw in Rome. In Cordoba, the reference point was the Great Mosque of Damascus. The point about these mosaics was surely that their use in the tenth century was in replication of the Great Mosque, and the story told in the twelfth and fourteenth centuries of the materials and mosaicists at Cordoba echoed the stories told of the mosaics of the Great Mosque of Damascus. At Cordoba, the presence of Byzantine legates in the tenth century and Muslim envoys to Constantinople make that particular exchange a bit more plausible, but a key issue for the Umayyads of Cordoba was their relationship with Damascus and the conscious echoing of their real or perceived Syrian Umayyad heritage.[137] Wherever the mosaicists were from, their mosaics were perceived as Islamic and Umayyad. Whether the story was a true one or simply a good one, the point was that both in the late tenth century, when the mosaics were installed, and in the fourteenth century, mosaic was perceived as a medium to be desired for what it said about you, the patron, your standing, your claims, and what and who you chose to associate yourself with. The use of mosaic was a deliberate statement of religious and political allegiance, both present and past: for Theodulf with the Rome of St Peter as well as that of Leo III and Charlemagne; for al-Hakam, with Umayyad Damascus rather than Abbasid Baghdad. As we have seen with Theodulf, as in Rome and Constantinople, as we saw in eighth-century Damascus, as with Cordoba, the medium was as much a part of the message as the images themselves, a medium of rulers and religions. Despite the increasing disintegration and localisation of what had been the Roman world, mosaic still seems to have carried weight as a Roman, an imperial, a Christian, an Umayyad medium.

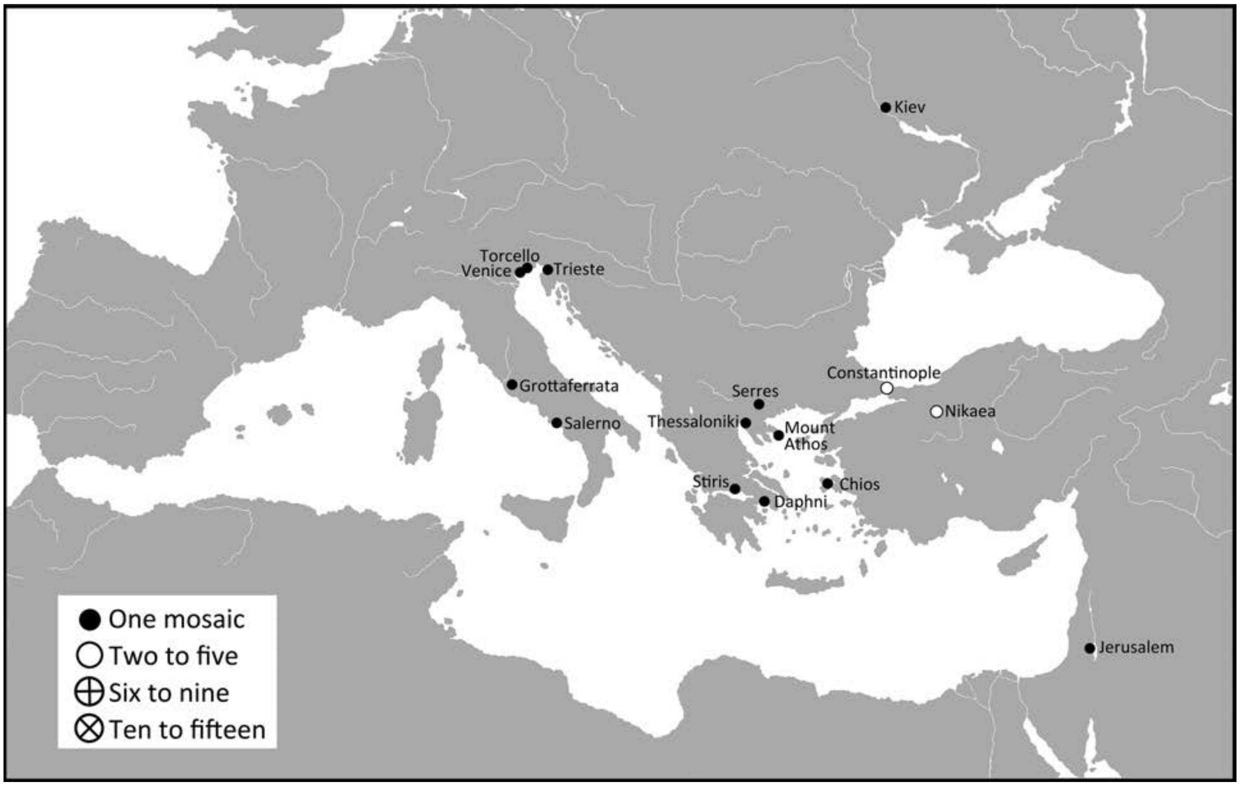
Chapter 10

A UNIVERSAL LANGUAGE? ELEVENTH-CENTURY MOSAICS

I START THE ELEVENTH CENTURY with the increasing spread of mosaics. As Map 8 illustrates, physical evidence survives for nineteen new surviving eleventh-century mosaics. The majority of these – thirteen – lie in the territories of the Byzantine Empire: six are in Greece; four in Constantinople (with textual sources adding five more); and three, including the now-lost Koimesis Church, from Nikaea. One survives from Kievan Rus', though two additional mosaics in Kiev are mentioned in written sources. One, the al-Aqsa Mosque in Jerusalem, is Islamic. Five are in Italy. None is in Rome, though the panel of the Virgin and Child above the altar of the Zeno Chapel in Pope Paschal's S. Prassede has been dated to any point between the eleventh and thirteenth centuries. And there is an odd fragment now in Bologna of the upper part of an image of the Mother of God, said to be eleventh century and Byzantine for no better reason than that it is a mosaic.[1]

What Map 8 indicates is that the evidence for the making of mosaics has swung away from Rome towards Constantinople and Byzantium. Why so many churches survive from Greece and none from Rome is impossible to say: it cannot be taken at face value (all there is is not all there was) but rather, as with all the maps, it reflects an element of the chance of survival and is an indication that, in this century's snapshot, more mosaics were being made in and around the Byzantine Empire than in Italy. It is the ways in which this Byzantine dominance has been interpreted and used to construct a particular sort of art history that will form the central theme throughout this chapter.

The previous chapter looked specifically at what mosaics might tell us about relationships between Rome, Constantinople and the Carolingians. It explored the concept of the Carolingian Renaissance in this context and took issue with how ideas about the development of art and the ways in which Byzantine



Map 8 New wall mosaics in the eleventh century.

Iconoclasm has been understood have contributed to yet another scenario in which 'Greeks' made mosaics in Rome. The material in the chapter also allowed for an exploration of the patronage of art in the period, reiterating earlier emphases on mosaic as a prestigious medium used to make political and religious points (the two should not be seen as separate in the Middle Ages) as well as personal statements. Though the motives for patronage matter as much in the eleventh century as at any time before, the mosaics of this period have, however, almost invariably been considered first in terms of the more formal art historical issues, most notably in the formation of what is known as the classic Middle Byzantine form of church (and mosaic) decoration. It is an idea that has been central in framing the understanding of mosaics in Byzantium after Iconoclasm. A second theme that will become apparent in this chapter is one that has underlain several other chapters in the book: the problems of dating and the ways in which scholars establish associations between mosaics, partly to establish a chronology and dating system, partly to explore the spread and influence of 'Byzantine artists'. The surviving mosaics of the eleventh century have been a particularly popular area for these debates.

The reason for these two focal points is the survival of – relatively speaking – so many churches that retain a good amount of their mosaic programmes. For the first time, churches survive with almost all of their mosaics still on the walls: the three Byzantine churches of Hosios Loukas, Daphni and Nea Moni.

BYZANTINE MOSAIC DECORATION IN GREECE

These churches in Greece have often dominated discussion of medieval mosaics, Byzantine and otherwise. All three present the same basic programme of mosaics: someone, usually it is presumed Christ, in the dome; the Mother of God in the apse; scenes from Christ's life in the nave; and saints throughout the church. Taken together, the extent and level of completeness of their programmes and the parallels in content between them, as well as the perceived stylistic and iconographic associations and dissociations, led Otto Demus to take them as a model for understanding post-Iconoclastic Byzantine church decoration.[2] I discussed something of the strengths and weaknesses of Demus' arguments in more detail in Chapter 4, but to summarise: Demus used the correspondences between the mosaics of the churches to suggest that there was a standard programme of Middle Byzantine church decoration that ran from east to west and from top to bottom; this he conceptualised in terms of the divine in the cupola and apses, a festival cycle and the choir of saints. Whether such a conscious, deliberate 'programme' actually existed is less certain than this implied, and I suggested instead that the images in churches, whilst they might share significances and could indeed, as Demus proposed, work on various levels, both literally and metaphorically, were nonetheless incredibly flexible and individualised to suit both context and patrons. I do not propose to revisit these discussions here, but rather to note that 'church programmes', in terms both of the 'fullness' of their development and of their style and iconography, have been used as a tool for dating eleventh-century mosaics, and for constructing a model of artistic influence in which Byzantium holds centre-stage. Less attention has been paid to how the use of mosaic might relate to political, social and economic conditions in the eleventh-century Mediterranean. We turn now to the specific churches and their mosaics.

HOSIOS LOUKAS

The monastery and pilgrimage site of Hosios Loukas, in Phocis in Central Greece (near to Delphi), is dedicated to a local holy man, Loukas of Stiris (also known as Luke the Younger), who was born in 896 and moved to the present location of the monastic settlement in 946/7, where he remained till his death in 953. There are two churches on the site: the smaller, a cross in square church, is the older.[3] This church is now dedicated to the Mother of God and has no interior decoration surviving. At some point in the eleventh century, the area to the south of that church was developed, and the present katholikon and the mortuary crypt below it were built and decorated with a combination of mosaics and wall paintings. This larger church also has a version of a cross in square plan with an octagonal dome.[4] The cross in square, by which I mean, very crudely, a square or rectangular church with a central dome over the nave and four short cross arms radiating out from the centre, is a form typical of what are labelled Middle Byzantine churches. It represents a major shift from the Early Christian basilica, the rectangular box which was still the dominant church form used in the West. Most cross in square churches are smaller than basilicas, but the plan creates, in its spatial effects, an interplay of high and low, central and side spaces, dim and well-lit areas, and the presence of a dome and squinches introduces several curved walls.[5] In many ways, it is a far better architectural shell for mosaic than the basilica.

Hosios Loukas is generally recognised as the earliest of the three Greek churches, though its date is uncertain. It is widely accepted as eleventh

century, constructed either between 1011 and 1022 or in the 1040s and 50s, whilst the mosaics and the wall paintings in the church and crypt are generally believed to date to this later period.[6] The problem with the earlier date is that it then means that there was a long process of completion and decoration of the church, some forty years, which is less necessary if the later date for the building and mosaics is accepted.[7] It is worth pausing to consider the likelihood of the construction and decoration of the church taking so long. There is evidence from other churches for building and decoration taking time: in Cappadocia, for example, several rock-cut churches were first decorated with repeated crosses, and only later fully painted; the church of Torcello equally seems to have been built several decades before it received its mosaic decoration. Certainly a church – any building – could only be built at the speed at which the money and the logistics allowed, and it is plausible that the mechanics of church building in a rather remote part of Greece were more complex and thus more time-consuming than those in a city such as Thessaloniki or Constantinople. Nevertheless, whether in the wilds of Greece or not, forty years is still a very long time to build and decorate a single church. Furthermore, if it is accepted that Hosios Loukas took so long, then that has implications for a great many other datings of mosaics, Nea Moni and Daphni being but two of these, where the assumption is often made, without consideration, that church and decoration were contemporary and briskly completed.

It is plausible that the mosaics were funded by the abbot, Theodore Leobachos (d. 1048), who came from a local family that had provided a succession of abbots to the monastery in the eleventh century and that had, as wealthy local nobility, provided much of the finance for the foundation. It has further been suggested that Theodore had the support of the Emperor Constantine IX Monomachos in the 1040s, though there is no actual evidence for this; rather it is a supposition based on the presence of the medium of mosaic and the scale of the church.[8] The marble decoration of the katholikon is recorded in an inscription as the contribution of Abbot Gregory, perhaps the next abbot after Theodore, and the man who completed the decoration of the katholikon.

At Hosios Loukas, mosaic survives throughout the katholikon church (Fig. 125). The original decoration of the dome has been lost: the painted image now there of Christ in Majesty or Christ Pantokrator, ruler of all, as he is usually identified, may have copied it, but is much later. In the apse is a seated Mother of God with her Child, flanked by angels, and there is a scene of Pentecost in the dome of the bema. In the nave, the spandrels and arches of the dome are occupied by scenes from the life of Christ (the Nativity, Presentation in the Temple and Baptism survive), whilst the Crucifixion and Anastasis are on the east wall of the narthex. Throughout the church, above the marble revetments are mosaic images of over 140 saints. There are contemporary frescoes in the three side chapels to the north and south of the central nave, the narthex gallery and the crypt.

NEA MONI

The second of the three churches is Nea Moni, the ‘New Monastery’, dedicated to the Mother of God, on the island of Chios. This is less problematic in terms of its date as it is conventionally acknowledged that it was founded by local hermit monks shortly before 1042. Doula Mouriki, who published the mosaics of the church, concluded on the basis of documentary evidence that they were produced for the Emperor Constantine IX Monomachos, who had a considerable reputation as a patron of churches both in Constantinople and in the provinces of the empire.[9] Mouriki also believed that



Figure 125 The mosaics of the katholikon, Hosios Loukas, Phokis, eleventh century. The scene of Pentecost is visible to the top left in the dome over the bema; the Nativity is in the squinch and various saints fill other available spaces on the walls and in the vaults.

they were completed between July 1049 and Constantine's death on 11 January 1055.[10]

Nea Moni is not a cross in square church. It has a rectangular ground plan with a central square nave crowned by an unusual octagonal dome, and two narthexes. The dome may have been designed specifically for a display of mosaics; equally, it may have been an experiment, or even the result of a design change as the church was built.[11] The interior of the naos is breath-taking, being twice as high as it is wide, and lavishly revetted in marble to a height of almost 6 metres. However, the design is not entirely successful, for the octagonal dome restricts the view of the sanctuary and apse, which means that there is no clear view within the church of the mosaics of the apse and side chapels.

Nea Moni shares the same decorative format as Hosios Loukas. It too has lost whatever was in the dome. In the apse is a solitary orant Mother of God, without her Child, hands upraised in the traditional position of prayer, flanked by Michael and Gabriel in the apses of the side chapels to left and right. The nave and narthexes again have scenes from the life of Christ (here the Annunciation, Nativity, Presentation, Baptism, Transfiguration (see Fig. 126), Crucifixion, Descent from the Cross and Anastasis in the naos and the Raising of Lazarus, Entry into



Figure 126 View of the interior of Nea Moni, Chios, eleventh century, from the floor of the naos, looking towards the dome. The Baptism and Transfiguration are in the squinches, with a cherubim visible beyond the Transfiguration.

Jerusalem, Washing of Feet, Ascension and Pentecost in the narthex). The inner narthex dome has a bust of the Mother of God at the centre, defended by military saints and martyrs. Again, saints – thirty-two in all survive or are known of – fill the remaining spaces.

DAPHNI

Finally Daphni, just outside Athens, is the most obscure of the three churches. We do not know to whom the church was dedicated; we do not know its function; and we have no idea of its patron. Virtually no historical documentation has been preserved about the date of the church or the mosaics and the circumstances of their manufacture but, on the basis of stylistic comparisons and the existence of Hosios Loukas and Nea Moni, there is a consensus that the church and the mosaics date to somewhere in the period between 1050 and 1150, and that the architects and mosaicists knew and were profoundly influenced by the (slightly less inconclusively dated) structure and decoration of Hosios Loukas.[12]

Daphni is a cross in square church. Unlike Hosios Loukas and Nea Moni, it retains its dome mosaic, an awesome Pantokrator, the half-length image of a sombre and majestic Christ (Fig. 127), right hand blessing, left hand holding a book, looking down on the worshippers in the church. It has a Mother of God and Child in the apse, flanked in the bema by the archangels Michael and Gabriel.[13] Scenes from the life of Christ are in the naos. The Annunciation, Nativity, Baptism (Fig. 128) and Transfiguration are in the squinches of the dome; the Birth of Mary, Crucifixion, Entry into Jerusalem and Raising of Lazarus are in the north cross arm; and the Coming of the Magi, the Anastasis, Doubting of Thomas and Presentation in the Temple are all in the south cross arm. The Death of the Virgin (the Koimesis or Dormition) is on the east wall of the inner narthex, and in the outer narthex are three scenes from Christ's Passion (Washing of Feet, Last Supper and Betrayal) and three from the life of the Virgin (the Prayer of Joachim and Anna, the Blessing of the Virgin and her Dedication in the Temple). Thirty-two saints survive again, but only nine are the same as the thirty-two at Nea Moni.[14]

The structures of all three churches affect the appearance of their mosaics. At Nea Moni, the mosaic zone begins at 5.9 metres above floor level, and the dome rises to a height of



Figure 127 The Pantokrator mosaic, Daphni, Attika, eleventh century, from the scaffold in 2009.



Figure 128 Detail from the Baptism mosaic, Daphni, Attika, eleventh century, again from the scaffold in 2009. The way the water of the Jordan runs across Christ's body creates a sense of translucency.

15.62 metres; at Hosios Loukas, the mosaics are some 10 metres above the floor and the dome rises to 17.7 metres; at Daphni, the mosaics are about 8.1 metres up and the dome is 15.8 metres high. At Hosios Loukas, the walls are so tall that the mosaics – generally on curved surfaces of the vaulting – are often high and hard to see. At Daphni, some of the mosaics are placed not in the vaulting but lower down the wall, though this presents all the problems inherent in placing mosaic on a flat surface. At Nea Moni, the mosaics are actually closest to the viewer but, as mentioned earlier, the architecture of the church, notably the construction of the dome, obscures the mosaics in the apse.

It would help to understand the churches and the question of why their patrons chose mosaic if a little more were known about the patrons and circumstances of each. Hosios Loukas, where the name saint, Luke of Stiris, was himself buried, was both an important local monastery and a pilgrimage church. The material evidence suggests a wealthy local patron, perhaps from the Leobachos family. Nea Moni had imperial patronage: the presence of Constantine IX has been detected in the iconography (King David in the Anastasis may be a portrait of Constantine, for example) and perhaps in the architecture.[15] For Daphni, we have no idea. But, put together, the three churches also suggest that there was enough wealth in this part of the empire to fund the costs of mosaics, and indeed of the lavish marbles which survive at Hosios Loukas and Nea Moni. They also imply an ability to deal with the logistics of construction, artistic endeavour and of simply getting hold of the materials: none of the churches is near a particularly significant city. Hosios Loukas is isolated; Daphni is near Athens which was a relatively small town in the eleventh century; Nea Moni is in the hills at a considerable distance from the ports of Chios. So the churches bear eloquent witness to the economic revival of the region, seen also in the developments in the larger cities of Thessaloniki, Thebes and Corinth, and to the confidence of the patrons in spending money on churches and mosaics; their very existence implies that this was a safe enough area of the empire for such patronage.[16] The presence of at least one very full mosaic programme (Hosios Loukas) not immediately or obviously founded or paid for by emperors, added to what we know of the two tenth-century Constantinopolitan churches founded by non-imperial figures, the Patriarch Antony Kauleas and the nobleman Stylianos Zaoutzes, also makes it clear that non-imperial and indeed non-patriarchal patronage were definitely a possibility in Byzantium.

I would also suggest that the survival of the three sets of mosaics in this province is an indication – as Map 8 also hints at – that there was rather more eleventh-century mosaic than has survived. It is not possible to work out how long the decorations took to complete in each church, nor how long the artists were present on site, nor indeed how many artists were involved. There are no records to explain how many workers were involved in carrying out the manufacture of the tesserae, the preparation of the surfaces and the setting of the tesserae; nor it it known for certain if the workers from one site moved to work at another. It is improbable that the mosaicists were locally trained in Phocis, in Athens or on Chios simply because none of those seems a likely place for a mosaic workshop; it is more plausible that they came from somewhere else. But the relationship between the mosaics of the three churches is the million dollar question. Is there any evidence to suggest that the artists of one worked at the others? If the work at Hosios Loukas was completed in the decade of the 1040s or 1050s, then it might be possible on style grounds to see the mosaics of Daphni being undertaken as early as the 1050s or 1060s by the same artists, but style is inconclusive and no definitive case has yet been made to establish that Daphni and Hosios

Loukas were not decorated at the same time by two separate workshops, with a third one active at Nea Moni.[17]

Art historians have gone further and sought to assign workshops (and/or artists) to the mosaics. Thus, for Hugh Buchthal, Daphni was the work of three separate artists or workshops, of whom the Dome Master was the most accomplished.[18] This division of the mosaic work by Buchthal into three groups coincided closely with Diez and Demus' beliefs about the image, though they argued that, as a result of the modern restorations at Daphni, the differences between the 'different' masters were not as great as at Hosios Loukas (where they supposed that one group of craftsmen was responsible for the naos, and a second, 'superior' group for the narthex, an odd sort of division given that Demus understood the nave as the more important part of the church).[19] They, like Buchthal, saw the Daphni 'Master of the Dome Christ' as an artist totally isolated in his genius from the rest of the work. The mosaics of the prophets, the scenes in the squinches, the angels in the bema, and some of the scenes on the walls (Crucifixion, Anastasis and Koimesis) belonged to the second group. The third group consisted of the other Christological scenes in the naos and all the narthex panels, which they saw as the latest to be done and as 'approaching the style of the twelfth century', whatever that means.

There is, of course, no way of confirming or denying these subjective interpretations of the style of the mosaics of the two churches and of the solitary 'genius' of the 'Dome Christ Master'. But once the mosaics are divided into three groups, what does that mean? Were they the work of different artists within the same workshop? Or of different groups of artists from distinct workshops all operating at the same time? Or active at other times: are the perceived stylistic changes also a sign of chronological differences? Buchthal explained the isolation of the Pantokrator genius by suggesting that he had been commissioned to produce the whole programme, but after completing the Pantokrator, he accidently fell off the scaffolding and died from his injuries, and the work had to be continued either by his assistants or by new artists.[20] Hosios Loukas highlights the workshops issue, for there the crypt has wall paintings, and the relationship between these and the mosaics is hotly disputed: were they created at the same time and by the same artists? There are striking stylistic differences between them: the bold and stark appearance of the mosaics contrasts with the more narrative and emotive manner of the crypt paintings, where details are added to enhance the narrative of the scenes, but this may easily be as much to do with the differences in working in paint and mosaic as with a change in artists.[21] If the same artists carried out the mosaics and wall paintings (and as Chapter 2 suggested, this is perfectly possible), it follows that a considerable variety of styles was something that they could handle as the circumstances required. Consequently, the subtle differences in the representation of the figures perceived at both Hosios Loukas and Daphni could as well be a response to the different locations of the images, or the work of an artist and workshop whose style has developed over the time that the mosaics were produced, as they could be the work of different artists and workshops.[22]

Intermingled with and informing debates about style have been assumptions about quality, encapsulated by the career of the 'Master of the Dome Christ'. This has led to a lot of debate as to whether the mosaics display visual elements labelled 'Hellenistic', 'Slavic' and 'Byzantine', discussions informed by pre-existing ideas about superior styles ('Hellenistic' tending to rate higher than 'Slavic' amongst many non-Slavic scholars) and the teleological development of art and what makes images 'Hellenistic', 'Byzantine', 'Slavic' or whatever – the ethnic origin of the artists, aspects derived from regional

art, questions of quality. These in turn have led into a broader set of stylistic concerns hung around the question of whether or how far the mosaics reflect a 'provincial' style or 'metropolitan' (in other words, Constantinopolitan) influences – and, squaring the circle, thus whether the artists came from Constantinople or elsewhere.

Both 'provincial' and 'metropolitan' have been used misleadingly to denote quality as well as origin. Thus, for example, because the architectural design at Nea Moni is considerably more radical and experimental than those of Hosios Loukas and Daphni, Nea Moni is seen as a metropolitan building whose master mason and even other masons was from Constantinople.[23] But the mosaics have been interpreted as the work of lay artists and so, confusingly, as inferior to the provincial mosaics of Hosios Loukas, the work of trained monks. Daphni, in contrast, was supposedly based on a lost model in Constantinople, and so of a higher quality, but because second hand to that model, not as good as the mosaics of the capital itself.[24] Whilst the architects for all three churches and the mosaicists, as well as the marble-workers, masons, brick-layers and the hordes of other workers needed, must have come from somewhere else (because none of these churches is a city-centre building), other cities besides Constantinople – Thessaloniki for one – had traditions of church building and mosaic-making.[25] If they were Constantinopolitan, that case needs to be made, not assumed through implicit beliefs that the centre was the only place from which quality and originality could be obtained. In fact, all three churches are 'provincial', in the sense that they were built in provinces of the Byzantine Empire, but their existence does not mean that 'provincial' can be used to equate to unsophisticated or unfashionable or inexpensive or even to rural unimportant patrons – the Emperor Constantine IX Monomachos himself was a sponsor of Nea Moni.

The debate about quality and artists and the relationship to each other of the mosaics of the three 'Greek' churches has a wider significance in terms of the dating of other contemporary mosaics. There are at least eleven scattered and generally imprecisely dated eleventh-century mosaics still on the wall, and one of the ambitions of art historians has been the somewhat chicken-and-egg process of trying to put them into some sort of sequence and to detect influences between them. Of these other eleventh-century mosaics, perhaps two can be dated with some precision. St Sophia in Kiev was begun in 1037 and inaugurated in 1046, and its mosaics are believed to have been completed by 1046; and the Constantine IX and Zoe panel in Hagia Sophia, Constantinople in its current form can be dated to 1042–50. The dating of the remainder is contentious and varied.

So, for example, Otto Demus, on the basis of stylistic evolution and, in effect, his reasoned, but personal, visual analysis of the progression of the art of mosaic in Byzantium proposed a sequence that ran: Hosios Loukas; St Sophia at Kiev (mid-eleventh century); Torcello; S. Marco; Daphni (at the end of the eleventh century); and S. Giusto at Trieste (the 'legitimate [stylistic] continuation' of Daphni).[26] In contrast, but very similar in methodology, Robin Cormack suggested that, although there are stylistic similarities between Hosios Loukas and Kiev, this does not mean that the mosaics of Kiev cannot be earlier than Hosios Loukas.[27] Cormack's sequence runs: Hosios Loukas perhaps 1040s to 1050s; Daphni 1050s or 1060s; and Torcello 1070s. He argued that a detached head of an apostle, either St Bartholomew or St James the Greater, and the detached head of an angel, both from the Last Judgement composition at Torcello near Venice, look remarkably similar in colour range and modelling to the head of John the Baptist in the side apse and to figures in the narthex cycles of the infancy of the Virgin and life

of Christ at Daphni.[28] In other words, the west wall of Torcello has stylistic parallels with both the presumed earliest and the latest mosaics at Daphni. Further, there are connections between the apostles of the main apse at Torcello and several figures at Hosios Loukas. All of this suggests that the three decorations should be linked together in their treatment of mosaic. Cormack posed the question of whether the mosaics of Hosios Loukas, Daphni and Torcello could be the products of one workshop over a generation or two, with the possibility not only that Daphni and Torcello were close in date, but that Torcello was the next commission for the workshop after Daphni.

Intriguingly in this instance, analysis of the production and composition of the glass tesserae in these mosaics adds some support to his arguments. At both Hosios Loukas and Daphni, the tesserae sampled were made either from plant ash glass or from a mixture of plant ash and natron glass; the major differences between the two are in terms of their colourants and opacifiers. A mixed natron–plant ash is also found at Torcello, where the colourants are close to those at Hosios Loukas. It has been suggested therefore that the raw glass for Hosios Loukas and Torcello was obtained from the same site and that the differences between the groups represent either two different glass production sites operating at much the same time on the Levantine coast or the same site, with two slightly different production times for the particular batch of raw glass.[29] Where and by whom the glass was coloured is another question altogether: in the Levant, in the Byzantine Empire or on site at Torcello?[30]

Nonetheless, these debates about dating highlight just how tricky it is to use style to date mosaics. The dating sequences sometimes rest on the assumption that the churches were decorated more or less sequentially, though in theory there is nothing, other than a presumed limited number of artists, to prevent the construction of a scenario in which many of these churches were built almost simultaneously, all using different but contemporary mosaicists. All that is relatively certain is that they date, in the construction of the buildings at least, and so probably in their decoration, to the eleventh century. The disputes about date have also established (or reinforced) a Byzantino-centric model of mosaic production: artists moved across these sites taking mosaic from Constantinople to Kiev, to Greece, to Italy. For Kiev, this is relatively unproblematic, for there were no previous mosaics in Rus' and the Rus' were strongly influenced in religious matters by Orthodox Christianity; consequently the artists of their mosaics must have come from somewhere outside, logically from the Orthodox Byzantine Empire. But in Italy, where there was something of a mosaic-making tradition, matters are less straightforward, and so it is to Italian mosaics that I now turn.

TORCELLO AND ELEVENTH-CENTURY MOSAICS IN ITALY

As is already apparent, the mosaics at Torcello tend often to be associated with the model of Byzantine manufacture, a part of the production line incorporating Hosios Loukas, Nea Moni and Daphni. But the mosaics at Torcello are thought-provoking in themselves and for what they say about mosaics in Italy as well as in Byzantium.

Torcello itself is an island in the Venetian lagoon, settled from at least the sixth century and, from the seventh century, the see of the bishop of Altino. In the tenth century, its population seems to have been in excess of 10,000, making it larger than Venice (which had been founded much later), and it was a major port in its own right.[31] Although as the laguna silted up

Torcello was increasingly abandoned, in the eleventh century it was a thriving town, with numerous large houses and twelve parishes: many affluent and aristocratic Venetians owned properties on the island, and there were several prosperous monasteries.

The large basilica church of S. Maria Assunta on Torcello was founded in 639 by the order of the Byzantine exarch of Ravenna and renovated in 1008 by its bishop, Orseolo, whose father was doge of Venice. Massively detailed studies by Irina Andreescu-Treadgold have dated the mosaics that still survive at the east and west ends of the church (whether there were any along the walls is unknown) with great precision.[32] In the apse is a standing Virgin and Child on a gold background, labelled in Greek but surrounded by an extensive Latin inscription. The image is another example of the survival of endlessly mutable apse mosaics: a Virgin Hodegetria, in which Mary holds her Son in one arm and gestures to him with the other, showing the way to salvation through Christ. Above this image, now lost, was probably a medallion of Christ flanked by two angels. Below is a band depicting the twelve apostles, Peter to her right and Paul to her left, and including two local saints, Heliodorus (supposedly first bishop of Altino) and Hermagoras (the first bishop of Venetia and Istria, allegedly appointed by St Mark). As in sixth-century Ravenna, and as with other areas in the Veneto, Venice and Aquileia among them, at Torcello the apse mosaic was used to make statements about local identity and contested local rivalries. In S. Marco in Venice, the mosaics commented through St Mark; in Aquileia, the wall paintings of the cathedral spoke of its close alliance with the Western Empire and its own apostolic origins, in contrast and challenge to Venice; in Torcello, Heliodorus and Hermagoras underlined the city's separateness from Venice – noticeably St Mark is not included in the apse – and its links with Aquileia.[33] Above the Virgin on the triumphal arch is a scene of the Annunciation, Gabriel on one spandrel flying in towards Mary on the other. The mosaics of the south chapel are also probably mid-eleventh century.[34] Here, an enthroned Christ is flanked by the archangels, Michael and Gabriel (said to be evocative of S. Agata Maggiore in Ravenna), whilst below Christ four Latin Church Fathers stand, all with connections to north Italy.[35] The vault shows four angels supporting a roundel, also strikingly evocative of Ravenna and S. Vitale, containing a Lamb, blood dripping from his chest. Its presence is significant: the 692 Church Council of Trullo had forbidden the representation of Christ as a Lamb, and the prohibition seems to have been followed obediently in Byzantine but not Western art: Christ the Lamb is certainly present in Pope Paschal's churches, for example.[36] So the Ravennate aspects also included a more contemporary and local take; one might also wonder how far Ravenna was seen as Byzantine or Latin in the eleventh century and how far it simply evoked tradition.

The final area of surviving mosaic is on the west wall. Here, a monumental Last Judgement occupies the whole wall, confronting the faithful as they left church. It dates originally to the eleventh century, but has had much done to it: both apse and west wall were repaired piecemeal after serious twelfth-century damage, and have also undergone a great deal of subsequent damage and 'restoration'. Andreescu-Treadgold established that the top two levels are twelfth century, but probably replicate what was there originally, whilst the bottom half dates to the later part of the eleventh century, perhaps the 1070s.[37]

The Last Judgement is arranged in bands (Fig. 129). At the top, the Virgin and St John stand either side of the Crucifixion. Below – the next event in the sequence – is the Anastasis, the descent of Christ to Hades to rescue the righteous dead. Below that is a register with twelve



Figure 129 Last Judgement mosaic on the west wall of the Church of S. Maria Assunta, Torcello, eleventh century with alterations, repairs and restorations. The six bands of mosaic move from Christ's Death and Resurrection to his coming in Judgement and the final fates of the saved and the damned.

seated apostles, either side of an enthroned Christ seated on the rainbow and in a mandorla, thus locating him in heaven. He is flanked by Mary and St John the Baptist (a deesis), and a choir of angels. From Christ's throne, a fiery river descends into the lower part of the mosaic, and ranks of angels, together with Adam and Eve, adore an Empty Throne bearing the instruments of the Passion. To either side of this, the land (to the viewer's left) and the sea (viewer's right) vomit forth their dead, in a variety of interesting ways. The next register down has two angels weighing souls in the centre below the Empty Throne. To the viewer's left stands a group of the saved, divided into bishops, nobility, monks and women; to the right, the dammed are

escorted into the torments of Hell, to burn with Hades, who holds Dives, the Rich Man of Christ's parable, on his lap. In the fiery torment, kings, emperors, bishops, nobles, women and monks are all easily distinguishable. The lowest register, just above the marble revetment, and either side of the west door, has a roundel of the Virgin, bust length, hands upraised in prayer, restored in the twelfth century, but plausibly always present.[38] To her right, our left, is Paradise, guarded by an angel and St Peter with his keys, and containing Mary herself, holding the souls of the saved, Abraham, with the Poor Man, Lazarus, on his lap, and the Good Thief who repented at the Crucifixion. To her left, six compartments depict the various torments in store for the damned, ranging from eternal cold or fire to the 'worm that sleepeth not'. The whole forms a graphic depiction of the Christian message of redemption and salvation through Christ's mission, and a shocking warning of the Judgement to come.

The Torcello mosaics are frequently described as 'Byzantine' in their appearance, comparable to Hosios Loukas and Daphni in particular.[39] Andreescu-Treadgold, for example, described the twelve apostles of the west wall as the most Byzantine of all the groups of apostles known in the north Adriatic area and as coming from one of the earliest Middle Byzantine workshops there. She saw the original west wall mosaics of the Anastasis and Last Judgement as entirely Byzantine in their iconography and technique, and of very high quality, even compared to Byzantine work in the empire (presumably the three Greek churches). Cormack's discussion of Hosios Loukas, Daphni and Torcello, and the work done on mosaic tesserae from those two sites and from Torcello, tends to support Andreescu-Treadgold's contention that the mosaicists were from Byzantium, and there is evidence that the glass came from the eastern Mediterranean, notably the Islamic Levant.

Despite this, the church itself was one in which the Latin rite was celebrated and so, however Byzantine the imagery, its function was Catholic rather than Orthodox. Much of the iconography must have been recognisable to its audience, what they were accustomed to, and how far the Byzantine aspects of the images were either noticed or appreciated by that audience is questionable. Categorising the mosaics as Byzantine should not blind us to their Western elements. The Church Fathers in the apse are Latin; the Anastasis as a scene is known from Rome from the eighth century (S. Maria Antiqua and the Zeno Chapel); it is difficult to be sure what of the Last Judgement iconography is 'Byzantine' or 'Western'.[40]

What of the links with Ravenna apparent in the mosaics of the south chapel? Does this mean that some of the mosaicists were from Ravenna or that the artists of this bit of Torcello were familiar with the Ravenna mosaics? (And if so, where does that leave the Byzantine artists?) Is the point here that such mosaics were viewed as 'Early Christian' and even Apostolic? Further, the evidence assembled in earlier chapters has suggested the probability of a continuing artistic practice of mosaic-making in Rome that can be traced from surviving mosaics into the tenth century, making it plausible that the Torcellans could have found mosaicists in Italy. If the artists employed at Torcello were Byzantine, this was therefore perhaps more of a choice than a necessity. The mosaics may well represent the selection of a distinctive 'Byzantine' style and of 'Byzantine' artists, not for want of anything better but as a part of Torcellan claims to status in north Italy, with respect to the local centres of Aquileia and Venice, and, perhaps more widely, with regard to Rome.[41] If Torcello's artists were from the empire, this perhaps reflected a deliberate association on the part of the port with Byzantium, a claim for or display of a political and economic connection at a time when

Torcello's most local rival, Venice, was also making claims in Italy about its closeness to the Byzantines. What is apparent at Torcello, and indeed at Venice, may suggest a new fashion in eleventh-century north Italy where patrons seem to be consciously looking to Byzantium rather than to Rome, as a deliberate and conscious assertion of standing and power.[42]

In this context, S. Maria Assunta and its mosaics need to be considered against what was going on in Venice just across the lagoon. Venice had been under the authority of the Byzantine exarch of Ravenna; when Ravenna fell to the Lombards in the eighth century, it remained under Byzantine jurisdiction as a Byzantine province. Initially governed by local nobles under a Byzantine official, a *doux*, this *doux* had his functions taken over by local officials, doges. In the ninth century, gradually Venice established itself as independent of Byzantium, with its own patron saint, Mark, and a growing sense of local pride and identity.[43] The development of the city as a maritime power was fundamental in this bid for freedom and self-governance, and the ninth to twelfth centuries saw the relationship between the two states continually shifting and developing. But as Venice grew and asserted itself, so Torcello, its local rival, needed to sit up and pay attention.

Which of the two cities invested first in mosaic is unknown: there is evidence for the use of the medium in Venice from the 1040s, when the church of S. Nicolo al Lido had had an image of Christ and archangels installed in its apse and central cupola.[44] But it was with the great church of S. Marco that the Venetians really invested in mosaic, in all over 6,000 square metres, putting Torcello's into what the Venetians considered its proper place.

The original church of S. Marco in Venice was built in the 830s and (probably) restored after a fire in 976; the current church is the third on the site.[45] This was begun in the time of Doge Contarini (1042–71) and finished under Doge Falier (1086–96), though it is possible that the first consecration of the main apse was completed by 1084.[46] The dating of its mosaics is horribly complicated. None is externally dated, and they cover a period from the eleventh century to the twentieth. The bulk of the medieval mosaic surviving in the church is in fact believed to be twelfth century, and so will be dealt with later. However, Otto Demus identified the apse decoration as being eleventh century, in part on the basis that this would be the first part of the church to be decorated. At the moment, the apse holds an image of an enthroned Christ dated to 1506, though felt to reflect what was there originally. For Demus, the original image, if the mosaics followed the Byzantine pattern faithfully, should have been a Virgin and Child; the choice of an enthroned Christ was thus a 'provincial' decision on the part of the patrons.[47] Other eleventh-century mosaics, truncated and restored, are found in the west porch (now the west wall of the narthex), where Christ is shown with the apostles and Virgin, and possibly in some of the east dome.[48]

Demus was keen to establish associations between these mosaics and Byzantium. Through style analysis, he saw S. Marco's mosaics as a 'development' of those at Hosios Loukas (whatever that means), but as very different from those at Nea Moni and Nikaea. He argued that the same Byzantine mosaicist was responsible for the mosaics at Torcello and then for the first phase of S. Marco, in that order, though at S. Marco this artist 'cut himself loose' from Torcello.[49] Demus used stylistic comparisons to obtain definitive dates. The mosaics of the niches around and above the central door of S. Marco, leading from the atrium into the nave, were ascribed to the period after 1063, perhaps as late as the 1070s. He saw them as like the apse apostles of Torcello, which he dated to the 1050s. The mosaics of the main apse of S. Marco he

dated to around 1084, arguing that they were later than Torcello and fifteen to twenty years earlier than Daphni. However, there are alternative stylistic arguments that suggest that the mosaics at Torcello may be later and that those at Daphni could be earlier, and consequently, Demus' dating sequences at S. Marco need to be approached with caution.

Demus also considered the S. Marco mosaics in the context of Venice's diplomatic relationship with Byzantium, both from the perspective of what they depicted and from that of who did the work on them. A chrysobull of 1082 which gave Venice a virtual trade monopoly in the eastern Mediterranean and the close relationship between the Byzantine emperors and the doges at the end of eleventh and into the early twelfth centuries allowed an influx of Byzantine artists and mosaic material into Venice to be posited.[50] Whether or not this was true, it seems fair to say that the two powers did have some form of special relationship, and it is plausible that this political element, as much as any artistic influences, was also a factor in the use of mosaic and the design of the mosaics, opening up questions of broader civil, religious and social aspects, not just between Venice and Byzantium, but also in terms of the city's regional status, and its rivalry with Rome.[51]

Within Italy, Venice had had little historic standing. It had not been a Roman settlement with the traditions, historic or apostolic, of other cities in Italy like Milan, Ravenna and above all Rome. Instead the city's rulers progressively continued to refashion Venice and its history, creating both an ancient history (the story of the foundation of the city at noon on Friday, 25 March 421) and a Christian history and standing (the role of St Mark as apostle to the Venetians and the arrival of his relics in the city).[52] Its early history had been dominated by its affiliations with the Byzantine Empire. The Byzantines had, in fact, protected Venice from the worst of the disruptions of the early Middle Ages in Italy, but by the eleventh century the Venetians were increasingly seeking their own autonomy. In establishing the power and putative supremacy of their own city, they were more than happy to play off Byzantium and Rome.

The great dogal church of S. Marco, dedicated to the city's patron apostle, formed a part of this process, a riposte to the great ecclesiastical buildings of these two other cities. In terms of Constantinople, S. Marco was said, in Venice at least, to have been modelled on the sixth-century Church of the Holy Apostles. Whether it was meant as an exact copy or a tangential reference is impossible to determine: what mattered was the Venetian belief that their great church evoked one of the most significant churches in Constantinople, the burial place of emperors and site of apostolic relics.[53] The Holy Apostles also had an extensive mosaic programme, and in this context it seems reasonable to see the mosaics of S. Marco as deliberately and consciously evoking something of the empire and its great imperial and patriarchal churches. But S. Marco was also a more localised statement. The idea of an 'Apostles' Church' was also one found in Italy, in former capitals and important northern rivals such as Milan and Ravenna, as well as in Rome. All three cities possessed mosaics, presumably in varying states of repair in the eleventh century, but those in Rome were the most potent. Here the greatest papal churches, those of the Apostolic Age of the fourth century, St Peter's, the Lateran, S. Maria Maggiore, S. Croce, S. Paolo *fuori le mura*, were all decorated in mosaic, symbol of power and authority, associated with St Peter himself.[54] In this context, as Demus himself pointed out, the perceived eleventh-century elements of the apse mosaic programme of S. Marco are closer to Early Christian and even Romanesque design than to Middle Byzantine: like S. Marco,

St Peter's had Christ in the apse, for example.[55] This cannot have been coincidence: rather, if Rome had mosaics, how could Venice, seeking to establish itself, not? Mosaic had another particular quality significant for the Venetians: it was a Roman medium that made reference back to the heroic Roman imperial past, a history in which the city had no actual share. It seems to me that this regional connection between mosaic, Romanness and the Apostolic Age was one that had continuing resonances for the use of the medium in Italy, and that this was a factor in its use in the eleventh century in north Italy as much as wishing to be associated with the splendour and glory of Byzantium. Other eleventh-century mosaics in this region including those in Trieste (S. Giusto, the Santissimo Sacramento with its mosaic of the Virgin and Child, two archangels, apostles, flora and geometrical patterns) may well also be a part of this local manoeuvring for position and prestige.

In the south of Italy, mosaics also survive at Grottaferrata and at Salerno. Southern Italy, although a series of principalities and independent states administered by their own rulers, also recognised the Byzantine emperor as overlord, and so both mosaics have been seen as heavily Byzantine-influenced. At Grottaferrata, the abbey and church of St Mary was reputedly founded by St Nilus in 1004 on the site of a Roman villa. Nilus was from a Greek family in Calabria and the abbey followed the Greek rite, though in communion with the Roman Church. The construction was completed by the time of his fourth successor as abbot, Bartolomeus, and consecrated by Pope John XIX (1024–32) by 1024. It was a grand building, incorporating a lot of *spolia*, presumably from the villa, and contained mosaic, though the extent of the ensemble is unknown. Mosaics survive in the inner narthex (a Deesis) and on the triumphal arch (Pentecost and saints, usually dated to the early twelfth century). The Deesis panel shows Christ blessing, situated between the Virgin and St John the Baptist; a figure at their feet may be St Nilus or Abbot Bartolomeus; Christ holds a book whose Greek text reads, appositely, 'I am the door; those who enter by me shall find salvation.' It has been dated to the eleventh century, as well as to the twelfth and thirteenth centuries.[56] Because a Deesis scene is sometimes seen as one of the most typical of all Byzantine images, although the composition was known in Rome from at least the end of the seventh century (at S. Maria Antiqua), it, taken with Nilus' Greek background, has led to a belief that the mosaics and mosaicist alike must have been Byzantine. This is possible. Equally, Nilus was from Calabria and his church was close to Rome, both physically and spiritually; his artist may well also have been, and his materials derived, as at S. Vincenzo al Volturno, from the *spolia* from an extensive villa.

At Salerno, the surviving mosaics in the cathedral are fragmentary and shabby in the extreme. Only patches survived the eighteenth-century remodelling of the church: in the east end a couple of evangelist symbols, Matthew and John (Fig. 130), and traces of the others; some scattered clouds on a gold background on the apse arch; some ornament in the form of fragments of a garland border and a medallion above and around the arch. A sixteenth-century description of the cathedral also records a now-lost mosaic inscription that went with the imagery.[57] This attributed the mosaic to 'Father' Alfanus, most probably Archbishop Alfanus I (1058–85), who was, with Robert Guiscard, the Norman ruler of Salerno, the founder of the church.[58]

In analysing the fragments at Salerno, Ernst Kitzinger asserted that, although they were comparable to twelfth-century mosaics in Rome at S. Clemente and S. Maria Trastevere, their assignation to Alfanus I and the 1050s–80s meant that they preceded these Roman parallels, and so



Figure 130 Detail of the eagle of St John the Evangelist, Salerno Cathedral, eleventh century. The surviving eleventh-century mosaics at Salerno are very battered. Nonetheless, Kitzinger found them superior to those at S. Clemente in Rome.

needed another model. Kitzinger suggested that, in style terms, the mosaics should be seen as the work of the Byzantine mosaicists employed at the Benedictine abbey of Monte Cassino, though these artists had in fact 'departed from the original Byzantine norm' by trying to produce work that looked Early Christian (which is to say like mosaics in Rome) rather than Byzantine.[59] Consequently, the Salerno mosaics formed the missing link in a chain of mosaic-making leading from Monte Cassino to the twelfth-century mosaics of S. Clemente in Rome, a connection without which, in Kitzinger's view, the S. Clemente mosaics came out of nowhere. This last is a point to which I shall return in the next chapter when I consider the mosaic of S. Clemente; here, the Salerno mosaics introduce another 'mosaic cliché', that of the reintroduction of mosaic as an art form by Byzantine mosaicists into Italy in the eleventh century via the rebuilding of Monte Cassino.

The abbey is one of those places whose significance in art history is perhaps seen as greater than it warrants. In part, this is because actual knowledge of Monte Cassino is limited by the Allied bombing in 1944 which destroyed it, opening the way for speculation as to what treasures may have been there. It was, however, one of the most important Benedictine monasteries of Italy, and in the tenth and eleventh centuries it was closely associated with Greek monasticism and the Byzantine lords in southern Italy. Byzantine emperors between 1079 and 1112 also sent gifts to the monastery in the hope of persuading Abbot Desiderius and his successors to mediate in Byzantine disputes with the pope and the crusaders. However, at the same time, Desiderius (1058–87, later Pope Victor III between 1086 and 1087) was also a strong supporter of the Norman invaders of Italy who in turn bestowed liberal gifts on the monastery. So Monte Cassino was both rich and powerful, able to intervene and also play off all the influential secular powers in the region for its survival.

As abbot, Desiderius carried out a major programme of renewal. Between 1066 and 1071 he lavishly rebuilt and redecorated the main monastery church, developed the scriptorium and extended the size and holdings of the abbey. As part of these spectacular refurbishments, Desiderius' chronicler, Leo of Ostia, recorded that the abbot sent a monk to Constantinople in *c.* 1070 to commission precious fixtures and fittings for the church, including bronze doors. He also hired mosaic artists from Constantinople to carry out work on the walls and pavements of the monastery church. Further, because 'magistra Latinitas', a tricky little phrase literally meaning 'Latin masters/teachers' but sometimes translated as 'Italian artists', 'had left uncultivated the practice of these arts [including mosaic] for more than five hundred years', Desiderius had young monks trained up in wall and floor mosaic-making, as well as in working in a variety of media including silver, bronze, iron, glass, wood and stone.[60] With this, coupled with the absence of surviving material from the abbey, the idea of an eleventh-century mini-renaissance, needed after a post-Carolingian dip (or perhaps a rebirth away from nasty Carolingian art towards superior Byzantine creations), was born. Its creation allowed Desiderius and Monte Cassino via Byzantium to be seen as establishing new standards and styles into elite ecclesiastical building in central Italy and indeed Rome itself, reintroducing large-scale church building and basilicas and transepts into central Italy and reviving the Early Christian traditions of the fourth to sixth centuries, both in the themes used in art and in the media, notably *opus sectile* for pavements and mosaic for walls.[61] As a result, Kitzinger, for one, claimed confidently that before the twelfth-century apse mosaic of S. Clemente, 'no mosaics had been made in Rome for hundreds of years'.[62]

How credible is this? It is a view of art and of mosaics that presumes that a revival was needed; and it assumes that Leo of Ostia wrote to no other agenda than a straightforward recording of 'facts' and 'the truth'. But was a rebirth needed and was Monte Cassino really so influential? Whether all of these arts practised at Monte Casino were really lost and whether all were considered Byzantine or taught by Byzantine craftsmen is unclear, and indeed another source, Amatus of Monte Cassino, attributed the mosaic floor to 'Greeks' (who need not have been Byzantines or from Constantinople and could have been 'Italian') and 'Saracens'.[63] As for Monte Cassino itself, despite everything, it was not a vast building and it holds a place in the history of art disproportionate to its size and non-existence, a position based on preconceived ideas about the decline of art in Italy and the significance of Byzantium in Italy.[64] In fact, rather than Monte Cassino being a cultural centre, John Mitchell has gone so far as to suggest that Desiderius' work there actually bought-in to already existing tastes and fashions, rather than setting them.[65] In terms of mosaic-making and the need for Byzantine mosaicists, Leo's claim of 'five hundred years' without mosaics has been recognised as a literary trope – just as well, since Roman mosaics are known from the ninth century. Whilst nothing survives of tenth- or eleventh-century mosaics in the city, it is clear that building work and artistic production more widely did not stop.[66] An argument *ex silentio* for mosaics might say that this two-century gap proves they were no longer made and that the skills of mosaic-making were lost; if so, ought that same argument to be applied to mosaic-making in Constantinople after the seventh century? It is plausible instead, given what is known of the history of mosaic-making in Rome, that mosaics continued to be made and repaired in the city perhaps on a small scale, especially by popes wishing to continue a long-established tradition in the great Early Christian basilicas of St Peter's and the Lateran if nowhere else. In a local setting, whilst Desiderius may very well have imported

Byzantine artists to train his local craftsmen, this was surely a deliberate move on his part, a political choice, rather than a total lack of artists.

Whether its artists and art forms were Byzantine or not, both abbot and abbey need to be considered first in the context of Italian, especially southern Italian, history. Monte Cassino had concerns about its holdings in Apulia and protecting them; it had been drawn into the papal orbit over the Gregorian reforms of the previous centuries; it was a Latin abbey and necessarily looked to the pope as head of the Latin Church; indeed, Desiderius himself was to become pope. The tenth and eleventh centuries had seen the Byzantine Empire attempting to hold on to its possessions and influence in southern Italy whilst under threat from the Holy Roman Emperors – Henry II of Germany in particular in the early eleventh century – a struggle in which Rome too became involved.[67] Concerned about papal interference in southern Italy in the 1050s, the Byzantine patriarch, Michael Kerularios, closed the Latin-rite churches of Constantinople and condemned a series of Latin liturgical practices, most notably the use of unleavened bread in the Mass, as well as the pope's (at this point, Leo IX) claims of supremacy. In 1054, the papal legate in Constantinople had served a bull of excommunication on the patriarch, who responded in kind. The situation was not improved by the Roman Reformers' zeal for the primacy of St Peter. In this context, both Rome and the Byzantine Empire sought the support of the influential and rich abbey of Monte Cassino, as they must have done with other similar powerful and well-endowed estates. To a point, Monte Cassino may have been able to afford to play the one against the other to its own ends, but only to a limited extent, for when push came to shove it was a Benedictine monastery and owed its allegiance to the pope, not the patriarch. Whether mosaic-making was dead in Rome or not, Desiderius' use of the medium still spoke to that city. If the mosaics of Salerno, with or without Byzantine artists, are any reflection of those of Monte Cassino, then the details that survive – the clouds, the Beasts of the Apocalypse/evangelist symbols, the use of a medallion above the arch – are all familiar in the context of the Early Christian mosaics of Rome. If so, then Desiderius' mosaics were perhaps a silent rejoinder to Pope Gregory, creating images at Monte Cassino that evoked Rome's apostolic and Early Christian past, but owed nothing to its current practices. Moreover, the church at Monte Cassino was a Western basilica church, presumably drawing its inspiration from the great Early Christian basilicas of Rome; its model, if one were sought, was surely St Peter's or the Lateran.[68]

In fact, events in Rome in the eleventh century may well have affected both the will and the resources of popes to found churches and sponsor mosaics. Mid-eleventh-century ecclesiastical politics in Rome were dominated by ideas of reorganisation and remodelling of the Church, above all in the so-called Gregorian Reform under Pope Gregory VII (1073–85) which aimed (in very simplistic terms) to create a reborn, purified church establishing a new world order under the law of Christ, with the successors of St Peter as its supreme authorities. Gregory's *Memorandum* of 1075 (the *Dictatus Papae*) made some major claims for papal supremacy and infallibility, adding to them claims for papal powers within the church, such as the ability alone to translate or depose bishops and, boldest of all, the power to depose emperors. These ideas of reform were not always popular in the city or the wider world – including Desiderius himself – and led to conflict with the major secular authority of the time, Henry IV of Germany. By 1084, Henry had captured Rome and installed Clement III as pope; Gregory had to be rescued by the Norman Robert Guiscard, who took the opportunity to sack the city, and he died

in exile in Salerno.[69] None of these occurrences made it an ideal time for grand new building projects in Rome, though they did not die out elsewhere in Italy: S. Vincenzo al Volturno was one site that continued to develop.

The mosaics of Torcello and Venice in the north and at Salerno, Grottaferrata and Monte Cassino in the south reveal both Rome and Byzantium, as well as a playing out of regional politics and point-scoring. What these cities did with mosaic may well have owed something to the Byzantine Empire, but it was also indebted to traditions in Italian mosaic-making. The use of mosaic rather than paint in a building was always a choice and potentially the decision about medium took precedence over that of appearance. Who patrons commissioned to make them may have been limited to who was to hand or may have reflected a distinctive choice for any one of a number of reasons, political and aesthetic alike. Was it about skill (though nothing we have seen thus far suggests that 'Byzantine' mosaicists were 'better' than 'Roman' ones) or cost or availability? But these eleventh-century Italian mosaics additionally raise a wider issue. We tend to assume that iconography (what is shown) was the choice of the patron and that style (the way in which it was shown) was the choice of the artist. One of the often unspoken questions that this raises is whether anyone then distinguished between styles in the ways in which we do now. How far did viewers of the mosaics at Torcello or Salerno or even Monte Cassino distinguish or recognise styles? Did they see what we call Byzantine in these images? And did it make a conceptual difference to have a Last Judgement put up by a Byzantine artist rather than a Roman? If it did matter, was that about fashion or did it carry diplomatic dimensions? There was a huge difference in the Western medieval world, which we have not always appreciated, between using Byzantine elements of style and iconography and actually consciously and deliberately wishing to be Byzantine.[70] At Monte Cassino, the Byzantine bronze doors were recycled sixty years later, in 1124: the Byzantine imagery was of less value than the metal. Rather than thinking of 'Byzantine style' equating to a conscious Byzantinism, it was perhaps only one element in a mixing pot of eclectic styles and fashions, the deployment of which was just one aspect in the struggle as communities jostled for position against each other.

The answers to these questions – in my view – vary wildly and need to be considered on a monument by monument, patron by patron, place by place, circumstance by circumstance basis. Monte Cassino was a product of its local situation and time in Italy: a building about the Benedictines in Italy; less about a lack of skill in Italy or a love of Byzantine art or even a perception of Byzantine art as marvellous, than about Rome and the situation in Italy. Venice, however, was heavily involved in trade with the empire and perhaps used Byzantium as a statement of difference and a challenge to other powers in the region, including once again Rome. The trade links between Torcello, Venice and Byzantium were such that artistic contact, in the form of the import of silks and other luxury items, might well indicate scope for an exchange in mosaics.[71] In Italy in this period as well, mosaics were more likely to be known at first hand from Rome in the first instance but also potentially in the north from Milan and Ravenna. Choices of what we call Early Christian or Byzantine motifs may have been deliberate acts, connecting the patron to Rome or asserting himself against Rome. And, finally, what of the mosaics in the Islamic world, in the mosques of Jerusalem and Damascus? Had their fame reached Venice? Did they hold any place in Christian awareness? But whatever the immediate context, mosaic, the medium, remained a prestigious art form, one that in the Christian Mediterranean spoke of Christian art and of the early days of

Christianity. The way in which it was used, therefore, was always loaded.

BYZANTIUM AND ITS MOSAICS

This brings us full circle and back to Byzantium. For all the talk of Constantinopolitan prestige and superior Byzantine mosaicists, and despite what does survive, we have little idea of what eleventh-century mosaics in Constantinople looked like (which is why so often the 'Byzantine' aspects of the non-Byzantine material is so desperately sought, in order to recreate what is lost). New mosaics were made, at Constantine IX's church of St George in the Mangana for example; they survived from the past; but although an unthinking acceptance of the classic schema for Middle Byzantine church decoration might lead us to suppose we can reconstruct the decoration of churches in Constantinople, all we actually know comes from a single mosaic panel in Hagia Sophia, and that tells a very different story, one of politics and marital intrigue.

This particular panel is located on the east wall of the south gallery, close to the image of the Virgin and Child in the apse (Fig. 131 and see also Fig. 32 above). Christ is enthroned in the centre, blessing with his right hand and holding



Figure 131 The Zoe and Constantine Monomachos panel, south gallery, Hagia Sophia, Istanbul, eleventh century. The changes to the heads of all three figures, as well as the inscription above the emperor are very obvious.

a book in his left. To his right, an emperor, identified in an inscription above his head as Constantine Monomachos, Constantine IX, offers a bulging bag of money to Christ. To Christ's left, an empress, identified in turn as Zoe, holds a scroll bearing the emperor's name that she offers to Christ. Consequently, the mosaic, assuming that it was the commission of the individuals shown, must date to the period of 1042 (when Zoe and Constantine were married) to 1050 (when she died). This is another image, like those of Pope Paschal, where the personal message of the patron is abundantly clear. Constantine and Zoe, the philanthropic and virtuous imperial couple, donate gifts to the church and so to Christ; they are shown in his presence, as befits their righteous standing; and they receive his blessing as good emperors ruling in a Christian fashion under God. The space in the south gallery where the panel is located may have been private imperial space, and so these may not have been meant as public images, though they are visible from within the body of the church.[72] The panels may also have once been full-length: it is possible that the revetment is later.

That aspect is clear enough but there is a complicating factor to the panel. All three heads, emperor, empress and Christ himself, have been altered, as has the inscription above the emperor and that on the scroll held by the empress. This makes it evident that only the emperor's name and identity has altered: Christ and Zoe were and remained Christ and Zoe throughout, though they once looked different. So the original mosaic must have shown Zoe and almost certainly her first husband, Romanos III (1028–34), whose name would fit the space. Zoe was rumoured to have murdered Romanos in order to make her supposed lover, Michael, emperor in his place, and it is not impossible that his head too was once there.[73] Romanos and Zoe had made a large donation to Hagia Sophia and presumably the panel originally commemorated this. In turn, Zoe and Constantine supplemented that to such an extent as to allow the liturgy to be celebrated daily in the church rather than just at weekends and on great feast days; just as he supplemented the church's income, so here Constantine supplanted his predecessor. The alteration was less a particularly miserly switch than the thoughtful reuse of an already existing panel that it would have been awkward to remove. The mystery is more why Zoe's and Christ's heads were also altered. One popular suggestion has been that it was to make Zoe look younger than she was, though this presupposes that she had previously been shown as old.[74] It is possible that, in the tangled history of Zoe's reign, the image had been defaced as a way of disregarding the empress and subsequently repaired on her return to power, but this does not explain the damage to the image of Christ. Furthermore, the replacement work has been done in such a way as to make it apparent that the heads have been replaced. As noted in a much earlier chapter, a skilled mosaicist should have been able to effect the emendations without a trace. It seems that a piece of the puzzle is missing.

Written sources give us evidence for mosaics in five more Constantinopolitan sites. The eleventh-century Byzantine author Michael Psellos mentions the presence of imperial mosaics in Michael IV's (1034–41) Church of SS. Cosmas and Damian and in Constantine IX Monomachos' (1042–55) St George in the Mangana. Stephen of Novgorod, who visited the city in the fourteenth century, noted what may have been gold mosaics in the church of St John the Baptist 'in Petra', which is believed to have been an eleventh-century foundation; these were also mentioned by the Spaniard Ruy Gonzalez de Clavijo. He visited Constantinople in 1403 and also observed mosaics in the Church of the Virgin Peribleptos (built by Romanos III, 1028–34 and restored by Nikephoros III Botaniates,

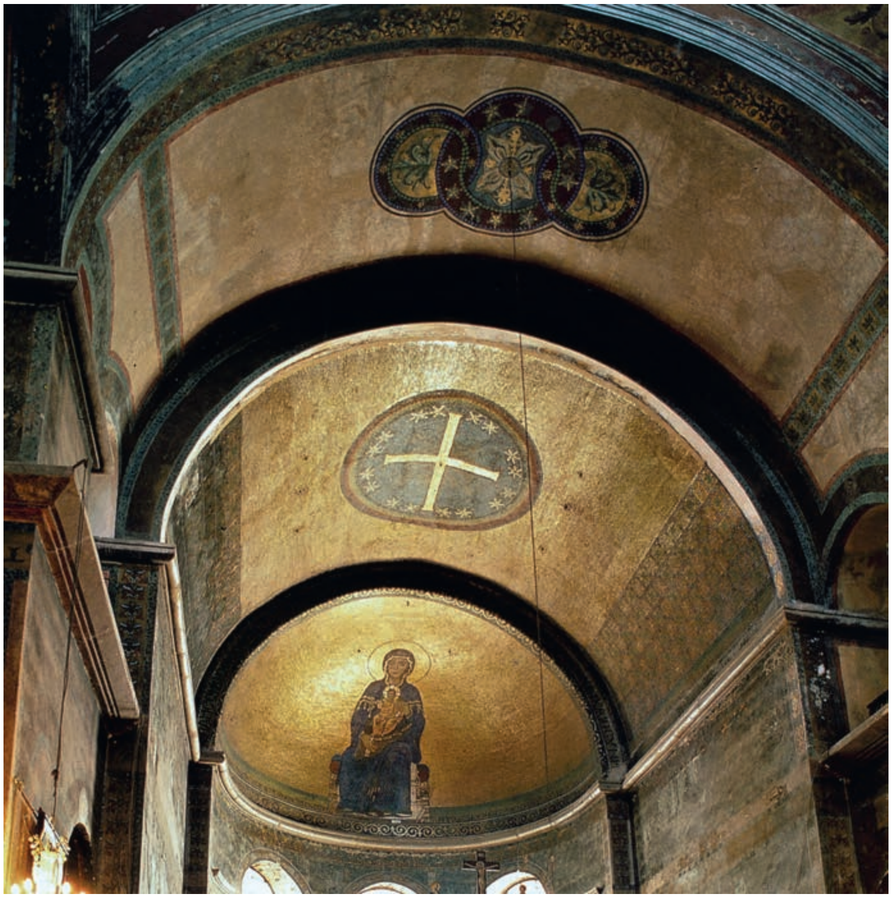


Figure 132 View into the apse of Hagia Sophia, Thessaloniki, eleventh century. Mary and her Child are eleventh century; in front of them in the vault of the bema, the cross, the patterns and the inscription below the patterns belong to the eighth-century reigns of Constantine VI and Eirene.

1078–81), whilst Anselmo Banduri, writing in 1711, claimed that eleventh-century mosaics existed in the 'Baths of the Blachernae Palace'.[75] These all highlight imperial mosaics and emperors using mosaic – perhaps almost as standard – within their new church buildings, associating themselves as builders with the great pious and philanthropic emperors of the past. No evidence survives from inside Constantinople of mosaics created by non-imperial patrons in the eleventh century; in contrast, elsewhere in the empire, if the patrons of mosaics were imperial, this has not been recorded.

Little mosaic work, other than in Greece, survives from the eleventh-century empire. There, in addition to the three 'classic' churches, the mosaics in the apse of Hagia Sophia in Thessaloniki, if not ninth century, may be eleventh century. In the apse, Constantine and Eirene's eighth-century cross was replaced by an image of the Mother of God, seated and holding her Child (Fig. 132). She tends to be described as 'squat' and 'heavy', her proportions as all wrong, and contrasted unfavourably with the dome mosaics, which have been seen as contemporary and by a superior craftsman.[76] It will come as no surprise that some have suggested that the artist of the dome was Constantinopolitan and that of the apse Thessalonian. But technically the apse mosaic was the trickier of the two. There the mosaicist had only a limited area to work in, the space left by the removal of the cross, set in a deeply curving

apse semidome. In the same region, in Serres, one of bigger towns in Byzantine Macedonia, and strategically located on the route to Thessaly, the metropolitan church dedicated to the Sts Theodores was mosaicked. A major fire in 1849 caused a lot of damage to the building and what mosaic survives (notably the Communion of the Apostles) is now in museums in the town.[77] The presence of mosaic here in what was, presumably, a wealthy city, allied to its use in Thessaloniki, suggests that mosaic was still obtainable as a medium outside of Constantinople (possibly there were still local resources in Thessaloniki) and that it retained a value for patrons. It was used even on Mount Athos, that centre of Byzantine monasticism: at the Monastery of Vatopedi, a mosaic panel depicting the Deesis above the main door may well have been an eleventh-century creation.[78] However, almost no mosaic survives from Athos, in contrast to wall painting. There is no obvious reason why the Athonite monasteries should not have been able to afford or obtain mosaic and so this seems likely to have been a matter of choice.

Finally, at Nikaea, east of Constantinople, in the now-destroyed Church of the Dormition, where the eighth- and ninth-century mosaics have already been discussed, evidence for eleventh-century mosaics was recorded in the narthex. Here, in a lunette over the door into the nave, was a half-length orant Mother of God; in the vault was an eight-armed cross at the centre, surrounded by four medallions: Christ, the Baptist, Joachim and Anna (Mary's parents); in the pendentives of the vaults were the four evangelists, writing away. A further panel over the door from the narthex into the south aisle showed Mary and her Child flanked by an emperor and a Byzantine official, identified via the accompanying inscription as Constantine and Nikephoros respectively. This and another inscription from the church make it clear that the as yet unidentified patron Nikephoros received the church and monastery as a gift from an emperor Constantine. Although these texts have previously been dated to 1025–28 and so to the reign of Emperor Constantine VIII, the emperor is now widely believed to have been Constantine X (1059–67) and so the date of inscriptions and mosaics moves to *c.* 1065–67, and are understood as brisk repairs to the church after a major earthquake in the city in 1065.[79] It is also likely that the two large mosaic panels on the eastern piers of the church depicting an unusual image of Christ Antiphonetes and the Virgin Eleousa date to the same period; the presence of Christ Antiphonetes may bear some relation to the Empress Zoe's (of the Hagia Sophia panel) veneration of him.[80] Tesserae have also been recovered from ruined churches in the city, indicating that the use of the medium was not restricted to the Dormition Church. This may be a similar situation to that in Serres: a wealthy provincial town with access to materials and artists and willing to use mosaic, presumably for the prestige it carried and the honour it offered to God.

What the mosaics of both Hagia Sophia in Constantinople and Hagia Sophia in Thessaloniki underline is the potentially piecemeal nature of mosaic decoration and renovation. In the Thessalonian church, a series of mosaic campaigns took place, some clearly changing already existing decoration (the Mother of God and the cross in the apse), others perhaps doing the same thing, or perhaps installing mosaic there for the first time. In Hagia Sophia in Constantinople, the same mixture of new and renovated mosaics is apparent; so too in Venice at S. Marco and in Rome continuously in the great Early Christian imperial basilicas. This contrasts with other churches where the mosaics were a once-and-for-all campaign, at S. Prassede and Hosios Loukas for example. Inevitably this reflects any needs for repair, but it is presumably no accident that the amount of continued

installation and renovation of mosaics was affected by the status and significance of the church The big, widely used and symbolically significant churches perhaps underwent more constant changes and renewals than those with a more personal, even immediate, importance, where a reason for such an intervention might not exist: why should anyone have wished to renovate S. Prassede, say, in the late thirteenth century, whereas a reason for work at the Lateran or S. Maria Maggiore always existed.

And then there is that mosaic from Dyrrachium (Durrës), discussed earlier in the chapter dealing with the seventh and eighth centuries, panels depicting the Virgin between two personifications, and dressed as a quasi-empress with St Stephen, angels and donors (see Fig. 106). The archaeology of the panel suggests a ninth- to eleventh-century date and yet the mosaic rarely appears in discussions of mosaics any later than the seventh century.[81] This may have something to do with the appearance of the panels, stylistically seeming closer to seventh-century images, not made from the best materials, and regarded as a not very good mosaic. But none is a convincing reason why the mosaic could not be later, and if so, it is an important reminder of what may have been lost and of what does not fit the conventional narrative of the period, a wider use of the medium in a city perhaps with aspirations of its own.

KIEV AND THE RUS′

There is one last piece in the eleventh-century jigsaw of surviving mosaics, and it does nothing to resolve any of the problems of style and iconography, content and programme, provincial and Byzantine. The church of St Sophia in Kiev was begun by Jaroslav (1019–54), grand prince of Kiev, perhaps in 1037, and inaugurated in 1046. It is generally accepted that the mosaic and fresco interior decoration was completed by this point.[82] This is, in many ways, a very unexpected case of the use of mosaic. Kiev was the main centre of the Rus', in effect their capital from the mid-tenth century into the twelfth century. The Rus' themselves were (put simplistically) people from the steppes of central Europe who formed themselves into networks of what have been called principalities in and around Cherson, under one grand prince based in Kiev. Both Rome and the Byzantine Empire sought influence in the region, with conversion as both an aim and a tool of manipulation. In the tenth century, Jaroslav's great-grandmother, Ol'ga, had flirted with Latin Christianity before converting to Orthodoxy, but even in the late eleventh century the Rus' were still negotiating with the papacy.[83]

The relationship of the Rus' with the Byzantine Empire was an aggressive one: in the early tenth century, there had been Rus' raids on Byzantine territories in modern Bulgaria and Constantinople itself. Emperor Basil II had been compelled to form an alliance with Grand Prince Vladimir I of Kiev (978 or 980–1015). Basil's sister had been married to Vladimir in 987 in a deal that saw Vladimir convert to Orthodoxy and support Basil with a large army in his ongoing civil war.

St Sophia was not the first Russian church to have mosaic decoration. Vladimir himself had constructed several church buildings suitable for his new religion and, almost certainly, to emphasise his association with Byzantium. He is said to have brought in Greek architects and artists, perhaps as a result of marrying Basil's sister, and this was probably the case, for the Rus' had no tradition of church building and certainly none of mosaic-making. We are told of mosaics in Vladimir's Tithe Church, begun *c.* 989 and completed *c.* 996.[84] It was Vladimir's son, Jaroslav, who was responsible for St Sophia some fifty years later.



Figure 133 View into the east end of St Sophia, Kiev, eleventh century. The majestic orant Mother of God dominates the apse, drawing the attention of the worshipper. Below her, Christ celebrates the Eucharist with his apostles.

St Sophia is a huge church – it covers an area of about 486 square metres. It has an elaborate multi-domed cross in square plan, with five aisles or naves and an open gallery around three sides of the interior. It seems that originally mosaic covered about 640 square metres of the church, in the dome and the area under the dome, the bema and the apse; now only about 260 square metres survive.[85] The mosaics still draw the eye to the part of the cathedral where the sacred ceremonies were (and are) performed. In the dome is a Christ Pantokrator with angels or archangels; the four evangelists occupy the spandrels; and a scene of the Annunciation and the busts of the Forty Martyrs of Sebaste fill the arches (only fifteen survive) (Fig. 133). In the apse is a standing orant Mother of God, about 5.5 metres high. Below her, the Communion of the Apostles is shown: the apostles, ranged six and six, receive bread and wine from Christ in the centre. Beneath are ten saintly deacons and bishops. The lost mosaics of the bema showed Old Testament kings and prophets; the vault of the bema may have held the Empty Throne. Although gold and silver tesserae are used, there is no marble revetment as with many Byzantine churches; instead, the frescoes cover the walls: the quantity of fresco may reflect a need to use imported mosaic materials sparingly. They continue the themes of the mosaics and are felt to be of a similar date and part of the same cycle.

The mosaics of St Sophia have inevitably been interpreted as replicating Demus' classical schema, the so-called 'system of Constantinople', with the Pantokrator in the dome and the Mother of God in the apse, but with two local variants: the presence of the saintly Pope Clement, whose relics were deeply venerated in Rus' and the large scene of the Communion of the Apostles with Christ as Priest.[86] However, we might prefer to see the mosaics not as programmed but as displaying several more local references, part of the great

variety that we have already seen in mosaic art, selected to fit local needs and requirements. Mary was herself regarded as a major figure in Kiev and so the choice to use her might also be taken as a local modification. The frescoes, although they echo the classic formula, also do considerably more, for the amount of church needing to be covered with images meant that a very great range of scenes was portrayed.

The place of St Sophia among the mosaics of the eleventh century, the likely use of mosaicists from Constantinople in their making and the subsequent judgements of their quality have dominated scholarly discussions. It is probable that the mosaicists for the Tithe Church and St Sophia did come from Byzantium, even from Constantinople: it is possible that a local workshop was established by the Tithe Church team, but if so, who knows what they worked on after that but before St Sophia. At St Sophia itself, Viktor Lazarev detected the presence of eight separate hands in the mosaics, though I suspect, even if this was the case, that it is indicative of one workshop rather than eight separate 'masters'.[87] Both Lazarev and Demus were rude about the Mother of God in the apse, Lazarev describing her as 'archaic' and provincial, and Demus as a 'third-rate' production.[88] This led inevitably to a grading of the mosaicists. Lazarev detected 'pronounced archaic trends', shared with Hosios Loukas, that were the inevitable result of local Russian masters being closer in spirit to provincial Greek masters than to the chief master from Constantinople.[89] Whether, as Lazarev hoped, the same mosaicists worked in eleventh-century Greece and eleventh-century Rus' is a matter, at present, of wild conjecture. We cannot make these stylistic and qualitative distinctions so easily; it seems preferable to approach the question from the other end: what might have been needed in terms of artists to make these mosaics? What sort of mosaicist would have travelled or been sent from Byzantium to Kiev?[90] The model of artistic practice that lesser artists might be sent out by their state or taken on by another runs contrary to everything we know about artistic practice in Italy in the late medieval period and after, when city-states were eager to send their best artists out, as a measure of prestige, and where patrons preferred the best to the second-rate.[91]

After St Sophia, the next evidence of mosaics in Rus' is some twenty years later, from the Church of the Dormition of the Kievan Caves Monastery (1073–89). The thirteenth-century *Pechersky Paterik*, a collection of edifying stories about the monastery and its founders and holy monks, describes the miraculous bringing of 'church painters' from Constantinople, the miraculous donation of mosaic from Greek merchants who had brought it to Kiev to sell, and the miraculous effect of the brightness of the mosaic of the Mother of God in the apse.[92] The church of St Michael of the Golden Domes was founded by Svyatopolk, prince of Kiev, between 1093 and 1113.[93] We know of the presence of a mosaic of the Mother of God there, standing with raised arms and open palms on the east wall (this sounds like an Orant Mary in the apse) and the church is also known to have had mosaics of the Apostolic Communion, Church Fathers, and saints including Thomas, Stephen and Demetrios.[94] Here, it seems possible that the builders and the artists of the Dormition Church and of St Michael's were the same: these building projects could have taken place in sequence.[95] The *Paterik* tells us that the Greek masters from Constantinople who built and decorated the Dormition did not return home but stayed in Kiev, where they died and were buried.[96] After St Michael, however, there is no evidence of mosaics in Rus'. Later rulers could not afford it or perhaps could not get hold of it, and so used fresco, though the memory of mosaic lived on. Fresco fragments from the church built in 1197 by Prince Ryurik Rotislavovich had gold

backgrounds, perhaps an evocation of gold mosaic tesserae.[97] Something similar is still visible on the walls of some Serbian churches such as the thirteenth-century Church of the Holy Trinity at Sopoćani, where the gold background is marked in black to look like tesserae.

It is unknown where the glass and tesserae for these mosaics in Rus' came from. The *Paterik* claims Constantinople; certainly 'the Byzantine Empire' would be a plausible answer. At the moment, evidence for primary glass-making in Rus' is tendentious, though this is not to say that it will not be discovered.[98] The accounts of some Russian scholars are unclear and misleading, tending towards a nationalist agenda, and blurring primary and secondary glass production in suggesting that glass and tesserae alike were local productions. Although there had been glass production in the Chersonese until the fifth century, whether this continued over the next five or six centuries has not been established. There is some evidence of tessera-making: at Podol, excavations uncovered furnaces and fragments of glass and tesserae, the latter perhaps for colouring already-made primary glass.[99] At Lavra, in the Metropolitan's Garden, close to the Cathedral of the Dormition, evidence for crucibles and glass and tesserae fragments, and potential colourants, was discovered.[100] It is conceivable that Vladimir's church building and his Byzantine craftsmen may have provided the impetus for the production of glass as a luxury object in Kiev.[101] In trade terms, in the tenth century, flourishing trade relations were established with Byzantium, and Kiev was the major commercial centre of the Rus': as suggested in the first part of this book, it was considerably easier in planning a mosaic to import raw glass and colour it on site than to import tesserae and improvise on the basis of what turned up.

These churches were the only ones in the region to have mosaic, and its significance and cost to its Rus′ patrons cannot be underestimated. But in Rus', unlike in Italy or Greece, the surviving evidence suggests that mosaic was a relatively short-lived phenomenon, a foreign import, restricted in range and used only for a brief time, an import that never took off as a local art form. All the examples come from the late tenth to early twelfth centuries; all were done under the patronage of the rulers of Kiev; the chances are that all depended on imported artists and imported tesserae. These churches were surely part of the development of the Kievan state under the dynasty of Vladimir, his son and grandson, and so perhaps tied to the rulers of the state at its heyday of political and economic power, and used as a status symbol, echoing Byzantium and the glories of the empire. They must also have been seen as an appropriate and distinctive vehicle for the new religion of Orthodox Christianity.

ISLAM

The final area of eleventh-century mosaic-making in the Mediterranean world comes from the Islamic world. The Dome of the Rock and its mosaics, damaged by an earthquake in 1016, were repaired in the 1020s. The seventh-century Umayyad al-Aqsa Mosque in Jerusalem also suffered from damage and restorations.[102] Al-Muqqadasi, writing in 985, described mid-eighth-century earthquake damage and restorations by al-Mahdi, including mosaics, though we have no details of these. In the eleventh century, under the Fatimids, there was a further reconstruction, and the mosaics of the mosque probably date to this rebuilding of 1035 rather than to 1187–88 as has also been suggested.[103] These mosaics are extensive. The ornamental pendentives of the dome are covered in gold mosaic (silver is also used), except in the centre where dish-like shapes (presumably made of plaster) with wreaths of vegetal motifs and peacock eyes

are embedded in the architecture. These have a striking effect, especially when the sun shines on them. The drum of the dome has sixteen panels of mosaic alternating with sixteen windows. These panels display vases with floral crowns, small water basins and bushes and trees, reminiscent of seventh- and eighth-century Umayyad work. There may also have been external mosaic on the dome.[104] Evidence also exists suggesting that there were wall mosaics on a splendid gate on the west side of the Haram al-Sharif in Jerusalem.[105]

I mentioned in an earlier chapter the inscription at the Dome of the Rock identifying 'Abdallah ibn Hasan al-Misri the Egyptian' as the mosaicist, and looked at the problems that the terminology used raises.[106] Another theory has been that the mosaicists were Byzantine and that al-Zahir (1021–36), the Fatimid caliph who restored the al-Aqsa, had a good relationship with the Byzantine emperor, who sent him Byzantine artists in return for being allowed to build or restore Christian churches in the city.[107] This sounds slightly like another reworking of an old, familiar story about Byzantine mosaicists and Islamic mosaics, and is awkward in terms of the nice round number of Byzantine mosaicists said to have been dispatched to Jerusalem. Constantine IX (1042–55) restored the Church of the Holy Sepulchre in Jerusalem, after the damage caused by al-Hakim in 1009 when the caliph ordered mosaics in the church to be destroyed. It is likely that this repair work included renewal of the mosaics, though by whom remains an open question.[108] It is not impossible that the mosaicists of the al-Aqsa were those men who had kept the Dome of the Rock in good order, and even that the mosaicists used on the Holy Sepulchre were the same, artists taking work wherever it was on offer. Whatever the truth might be, again the important point is less whodunit but instead why mosaics were used on this building at this time. The al-Aqsa was a revered and venerable mosque; it was built at the end of the seventh century by the Umayyads, also responsible for the Dome of the Rock and the Great Mosque of Damascus, and so plausibly contained mosaics from the start. Like those mosques, it said more about Islam than Byzantium both then and in the eleventh century; like them, it was a challenge to the glory of the Christian churches of the region, and mosaic was part and parcel of its being.

In 1959, Cyril Mango commented that 'the chronology of the Byzantine mosaic assemblages of the eleventh century, the "classical age" of Byzantine mosaic decoration, is as yet somewhat imprecise'.[109] This imprecision remains the case (though whether it was any sort of 'classical age' is another issue altogether). Although the question of dates and consequent interrelationships between mosaics in the eleventh century is the one that has perhaps most concerned art historians, an attempt to impose a structure and pattern on material that is both fragmented and widely scattered is perhaps a distraction. It has led to the similarities apparent in the mosaics of three churches, Hosios Loukas, Nea Moni and Daphni, from one Byzantine province becoming defined as the norm, and that which is different being labelled as 'provincial' or 'archaic'. In Anthony Cutler's delightful phrase, it 'imposes a chafing and ultimately distorting corset on the body of Byzantine art both metropolitan and provincial'.[110] It also imposes a form of chronological straitjacket for which there is little justification. In the context of the Byzantine Empire, what is apparent in the mosaics of these eleventh-century churches appears to replicate what can be deduced from textual sources of tenth-century mosaic-making in Constantinople. Whether this makes the three churches norms or archaic is impossible to tell, since we lack the evidence from the eleventh- and twelfth-century capital that would show whether mosaic-making had changed there. And in looking to associate all

eleventh-century mosaics in some way with the aegis of 'Byzantium', similarities have been emphasised to the detriment of differences. Both aspects need to be taken into account and mosaics considered in their own locations as well as in the context of an idea of a 'greater Byzantium'.

Despite the dispersed and limited nature of the evidence for mosaics in the eleventh century, a considerable amount was made, especially if what survives is the tip of the iceberg; furthermore, it was scattered across the Mediterranean. The medium was employed in Byzantium, in western Europe, in the Fatimid Empire and in the kingdom of the Rus'. Rulers found it a useful tool to make political points, as objects that might associate them with the Byzantine Empire, that might connect them to the Umayyads, that might both link and separate them from Rome. Mosaic was also used in what seem to be smaller, more personal foundations, such as the three 'Greek' churches – do they suggest that all bishops and abbots aspired to mosaic? Earlier fragmentary survivals suggest this sort of use in earlier periods, but these three churches provide a unique grouping in a relatively small area of this sort of patronage.

By the eleventh century, the once unified Mediterranean world of what had been the Roman Empire was well and truly fragmented. Nevertheless, the distribution of mosaics implies that both the artists and the materials of the medium were – relatively – accessible throughout that world. It also supports the contention that there were several centres of mosaic-making in the West, in the Byzantine Empire and in the Islamic world. Eleventh-century mosaics reinforce the model of itinerant mosaicists going to where the work was. In some cases, it is possible that new mosaic workshops, some short-lived, others longer-lasting, were established – at Kiev perhaps, Venice, even Monte Cassino. In others – Daphni, Hosios Loukas, Nea Moni – the mosaicists came, did their business and moved on. The spread of the medium also indicates that glass or tesserae could be obtained at all of these sites, whether through the reuse of Late Antique material (as at Grottaferrata) or brought to the site (Hosios Loukas). That in turn suggests that there was an on-going trade in glass and tesserae, and that trade routes were open, even with the Islamic Fatimid world. There is no clear indication at Hosios Loukas, Nea Moni, Daphni or indeed Torcello of the sort of shortages apparent at Poreč in the sixth century. Mosaic was, in its own way, a unifying force.

However imprecise the chronology of the mosaics, surviving eleventh-century mosaics reveal that the medium itself remained important and prestigious, one that still signified Rome and the Roman Empire, whether that was the Early Christian Rome of St Peter or the Eastern Empire of Byzantium. It resonated, East and West, as a Christian medium, yet it was an art form that could be appropriated by the Rus' to establish their state and used by the Fatimids to evoke a heroic Islamic past. It could signify Rome and Romanness, both of the imperial age and of the Early Christian period. Mosaic had both a local and a wider context.

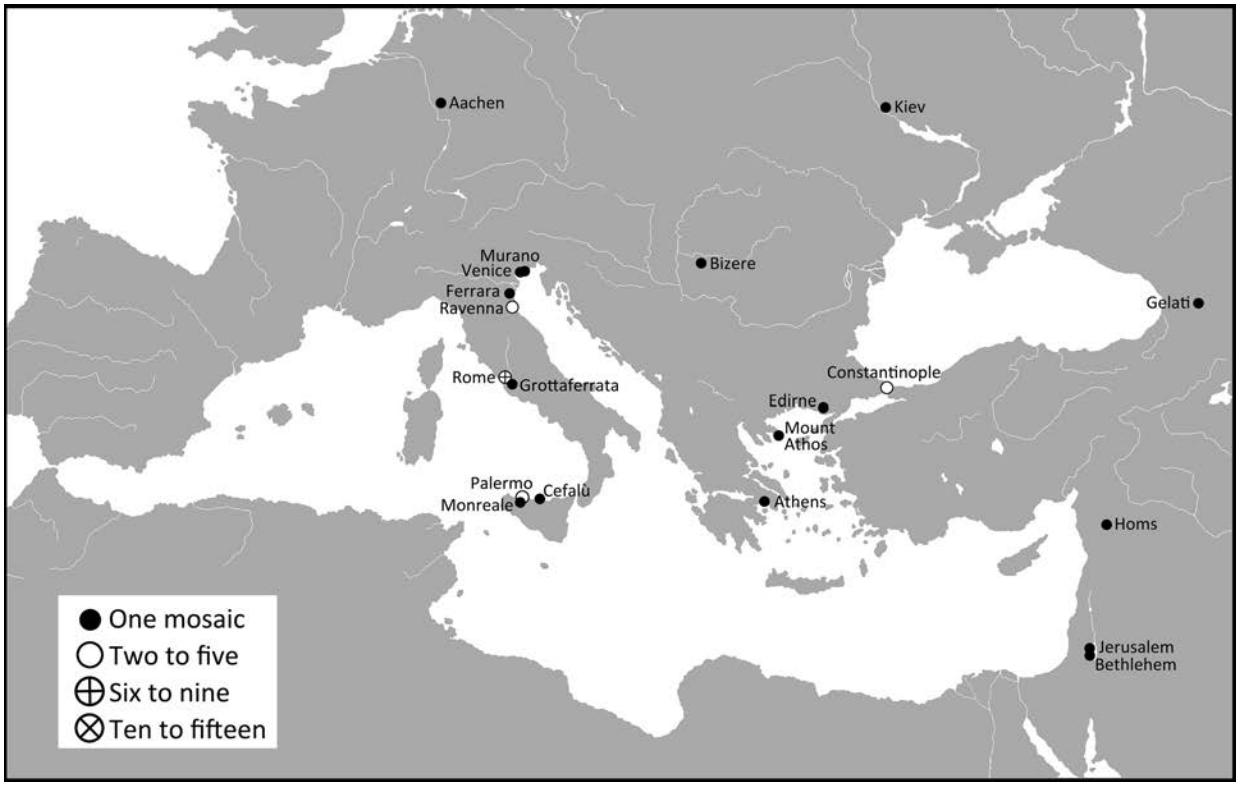
Chapter 11

INCORRIGIBLY PLURAL: MOSAICS IN THE TWELFTH CENTURY

IT IS THE WIDER setting alluded to in the previous chapter that twelfth-century mosaics highlight. Thirty-three new mosaics have been recorded for this century. In contrast to the eleventh century, new Italian mosaics – twenty-one in all – are back on the agenda and dominate the record. Seven of these are in Rome, six are in Sicily and two come from Venice; however, the mosaics of Sicily and Venice fill the buildings they are in and so represent a greater quantity overall than the numbers suggest. The remaining thirteen mosaics are evenly distributed between the seven in the Byzantine Empire (three of which are in Constantinople), three in the Levant, two Christian and one Islamic (the Church of the Nativity, Bethlehem and the Holy Sepulchre, Jerusalem, and the al-Nuri Mosque in Homs), two in Greece, and one apiece in Asia Minor, the Balkans, Georgia, Rus' and the West, at Aachen (Map 9).

Textual sources add another sixteen mosaics. Ten appear to be from Constantinople, though the location of all is not clear, and almost all are images of emperors, specifically members of the Komnenian dynasty who ruled throughout the twelfth century. Three more are Italian, one French, from Abbot Suger's work at Saint-Denis in Paris, and two Cairene, from caliphal but secular contexts.

This quantity of mosaic for the twelfth century is almost double the number recorded for the previous century and reinforces the sense of an upwards trajectory from the figures of the ninth and tenth centuries. The spread of the material also implies a somewhat wider use of the medium. In Italy, for example, mosaic was employed for the first time in cities such as Ferrara and Palermo, as well as in places where it has already been noted, Venice and Rome. This may well indicate a greater recognition of the conceptual value of mosaic, a wider appropriation of the medium, perhaps on the back of its increased eleventh-century use. It must



Map 9 New wall mosaics in the twelfth century.

surely also imply that glass was more accessible, and that mosaic was more available and affordable.

The way in which the twelfth-century material has tended to be understood shares something with the debates around eleventh-century mosaics: the question of how the different mosaics may relate one to another and what their relationship with Byzantium may have been (style, iconography and artists once more). Ernst Kitzinger, who published widely on the mosaics of Norman Sicily, was clear that he saw them as foundations on which to reconstruct the lost mosaics of Constantinople itself.[1] Demus too, both at S. Marco and in Sicily, was also concerned to associate the Italian mosaics with Byzantium. This inevitably coloured their approaches, leading to a focus on elements within these mosaics that made them Byzantine. I will specifically pick up on this issue later in the chapter, but, before that, I am going to marshall the material for surviving twelfth-century mosaics. I will start with the evidence from the Byzantine Empire, move to Italy, where my focus will lie primarily with Venice, Rome and Sicily, and conclude with the mosaics of the Levant.

THE EMPIRE AND ITS ENVIRONS

Because the twelfth-century mosaics outside the Byzantine Empire are so often discussed in the context of Byzantine mosaic work, it is perhaps helpful to open a consideration of mosaics in this period with what we know of them within Byzantium itself.

Here, compared to the world outside, physical evidence of mosaics is in short supply. Beyond Constantinople, in the monastery of Vatopedi, on Mount Athos, the mosaics mentioned in the



Figure 134 Apse, Church of the Virgin, Gelati, twelfth century. The lower part of the mosaic has lost its tesserae and has been repainted.

previous chapter have also been dated to the twelfth century. Elsewhere, there was a probable twelfth-century mosaic depicting the Virgin and Child in Athens in the church dedicated to the Mother of God Atheniotissa, better known now as the Parthenon. A handful of its tesserae survive in the British Museum.[2] This mosaic, presumably in the apse, may have been the only one in the church: Athens was not a very wealthy or important city at this point and we have no real way of dating the mosaic or its donor. The *typikon*, or regulatory charter, of the Monastery of the Mother of God Kosmosoteira, an imperial foundation in Thrace, records another mosaic image, one of the Koimesis of the Mother of God on the west wall of that church. Also in the same region, there may have been a wall mosaic in a monastery at Bizere (Frumuseni), and scattered tesserae at Kral Kizi (Edirne) near the Sea of Marmara and from Nikaea may indicate the presence of twelfth-century mosaics there. One further example comes from Gelati (Kutaisi), in Georgia. Here, the monastery church, a domed cross in square building dedicated to the Mother of God, was built during the first quarter of the twelfth century. The mosaic in the conch of the apse was part of the original decoration (Fig. 134). It shows Mary between the archangels Michael and Gabriel and is the only surviving post-seventh-century monumental mosaic in Georgia.[3] The church was founded by King Davit IV 'the Builder', as his funeral church, though he died before it was completed, at a point when Georgia was in a period of political, economic and cultural expansion. Davit's choice of the medium was presumably a nod to previous Georgian uses of the medium in the sixth and seventh centuries, an evocation of the glorious past. But in this instance, as at Kiev in the eleventh century, the artists and raw materials for the mosaics may well have had to come from the empire, since there is no evidence to suggest that Georgia had any mosaic workshops at this time. What the existence of the mosaic also implies is

that, if a patron was determined enough, then mosaics could be made almost anywhere. In contrast, at St John in Ephesos, George Tornikios (bishop from 1155 to 1156) recorded graphically, if not necessarily accurately, that he was in constant danger in the church from falling plaster and mosaics (and that owls and bird droppings filled the building). It may well have been the case that, more widely within the empire, churches (as opposed to monasteries) suffered from a lack of money: a little earlier at Aphrodisias, the church decoration was renewed in paint rather than mosaic.

For Constantinople itself, little survives. There is a mosaic panel depicting John II Komnenos (1118–43), his wife, Eirene Piroska and their son, Alexios, in Hagia Sophia (Fig. 135). This is located on the east wall of the south gallery, separated by a window from the Constantine IX and Zoe panel. It echoes this panel in its layout: John and Eirene stand either side of a seated Virgin and Child, who holds out his hand in blessing. The imperial couple offer money and a scroll, just as Constantine and Zoe do. Young Alexios is on a side wall, at 90 degrees to his mother. Quite what donations the panel commemorates are unknown, and whether the panel was laid out as one or made in two stages, emperor and empress first, with Alexios added, is disputed.[4] It is usually dated to between 1118 (John's coronation) and 1134 (Eirene's death, though there is no real reason why it could not have been put up after this). Although it is only one panel, it carried more weight than its size might suggest. Like the Zoe and Constantine panel, it celebrated the emperor and empress as virtuous and pious, in the company of Christ and his Mother. Not only that but, like the Zoe panel, it placed a mosaic of the imperial family in Hagia Sophia, the great church of the empire, giving them an eternal presence there.

Although the material evidence for mosaic is limited, the Komnenian dynasty, emperors for much of the twelfth century, seem to have made



Figure 135 The John, Eirene and Alexios panel, south gallery, Hagia Sophia, Istanbul, twelfth century. This is located to the right of the Zoe and Constantine IX panel, with a window between them.

considerable use of the medium. In John II Komnenos' great monastery dedicated to Christ Pantokrator (inaugurated *c.* 1136), a few ornamental fragments in costly red and gold and cheaper blue survive in the window arches, and almost certainly indicate the wider use of the medium there, as one would hope, since this monastery was a major foundation.[5] Its presence represents a use of the medium by a pious patron for the greater glory of God, part of John's overall lavishing of resources – most notably marbles – on his church and monastery. Similarly, it is possible, though not conclusive, that some of the mosaics of the Church of the Holy Apostles were made in the twelfth century, and that there were also mosaics installed in other churches such as the Chora (the Kariye Camii) and the Odalar Camii (where the dedication is unknown).[6] The patron of the Holy Apostles would almost certainly have been an emperor and the twelfth-century patron of the Chora is known to have been Isaac Komnenos, a member of the imperial dynasty. So it is clear that mosaic was at the very least an imperial medium in twelfth-century Constantinople, though since non-imperial mosaics are known from outside the city – at Athens, for example – it is probable that the medium was employed more widely.

In fact, beyond the material remains, considerably more written material survives than from before or after for the employment of mosaic to depict the emperors themselves. We are told that Alexios I Komnenos, John's father, was portrayed, probably in mosaic, in the Kouboukoleion, the Golden Chamber, of the Blachernae Palace, triumphing over his enemies and mourned by his son. John's son, Manuel I Komnenos (1143–80), built halls in the Great Palace and the Blachernae and decorated both with mosaics, including images of himself and possibly scenes depicting his victories in southern Italy.[7] At least three other images of Manuel are recorded, though their locations are unknown; one may have been in the Hodegetria Monastery. Another palace, the Mouchroutas, contained mosaics and Islamic-style decoration. Andronikos II Komnenos, Manuel's successor, appears to have had rural and hunting scenes depicted in mosaic in his quarters at the Church of the Forty Martyrs, and his successor, Isaac II Angelos, seems to have moved, rather than necessarily commissioned, mosaics.[8] This use – and the surviving imperial panel in Hagia Sophia was part of the same thing – was not new. Emperors had represented themselves as triumphant, pious, wise and legitimate in a variety of media and on a variety of scales, from very big, public statues to more intimate pictures in manuscripts, for as long as there had been emperors. But the evidence about mosaics that survives from the twelfth century is a reminder of this and underlines the importance of such a display: indeed, imperial images from the twelfth century survive in a variety of media and on a scale not matched for centuries, which may indicate that the Komnenian emperors placed particular importance on the presentation of their imperial selves.[9] It also implies the continued importance of mosaic as an appropriate medium for such demonstrations. By the twelfth century, sculpture in the round was rarely used in the empire, and had not been for many centuries: large imposing imperial images thus demanded other media, and mosaic, costly, brilliant and working well on a large scale, must have been effective.

MOSAICS BEYOND BYZANTIUM

In contrast to this paucity of Byzantine material, a considerable quantity survives from elsewhere, including evidence from some unexpected outliers. Although wall mosaic was not, and never really had been, a major art in northern Europe, it

was not unknown, though its last recorded use here was that of Charlemagne and Theodulf in the ninth century. Nonetheless, the appearance of two new examples in Paris and in Aachen comes as a surprise. In Paris in the 1130s–1140s, in his rebuilding of Saint-Denis, the burial church of the French kings, Abbot Suger had an external mosaic, 'contrary to modern custom' in Suger's own words, placed on the tympanum above the door of the church. In Aachen, Charlemagne's mosaics in the Palace Chapel were redone (not removed) in 1165 to suit the installation of Emperor Frederick I Barbarossa's octagonal chandelier.[10] Suger's use of mosaic may simply have reflected his liking for the bright and glittery, but it may also have come from his knowledge of Rome and St Peter's. Equally, Frederick Barbarossa's mosaics in Aachen certainly evoked Charlemagne, his predecessor as Holy Roman Emperor, but this too surely brought to mind what Barbarossa himself knew of in Italy, and I would suggest that, for both men, the association of mosaic with St Peter's was an important one. From where Suger and Frederick found their mosaicists and materials is another question: Italy is perhaps a more plausible answer than Byzantium.

MOSAICS IN ITALY

According to Otto Demus, in the making of mosaics in the twelfth-century, 'Southern Italy had relapsed into provincialism, Rome produced a few works in a coarse technique and in almost slavish imitation of earlier decorations; the grand execution of St Mark's had not yet begun on a large scale, and the mosaics executed in Ravenna in 1112 and in Ferrara in 1135 were isolated works of Greek artists who left no lasting schools behind them.'[11] This is a view that has resonated and goes on echoing: I suspect it is why so little has been written about Roman mosaics of the twelfth-century, other than what might be deduced of their Byzantine antecedants. But is it a valid picture of Italian mosaics, or a limited and unrepresentative overview?

Surviving mosaic work from twelfth-century Italy highlights that mosaic continued to be made in the region, as it had been since the fourth century. I will take the Italian mosaics by location, rather than discussing them chronologically, because I tend to think that the strongest relationships the new mosaics have is with those in the same city or region; those are what patrons knew of in the first instance. However, to show how they relate over time and place, see Table 10.

What this table indicates is that mosaic was consistently made in Italy: in Rome and Venice throughout the period; in Ravenna, clustered at the start of the century; in Sicily forming a very coherent group from the 1140s to the 1190s. The table also suggests – and this is an easy point to overlook or forget – that mosaic-making was more widespread than the focus on Venice, Rome and Sicily would suggest, and could have been even more extensive. At Ferrara, fragments survive of a mosaic from the Cathedral Church of S. Giorgio (consecrated 1135) in the apse and on the triumphal arch, dated to the construction of that church; who made them is unknown.[12] At Grottaferrata, the scene of Pentecost on the triumphal arch is usually dated to *c.* 1191, and sometimes unconvincingly seen as the work of a Sicilian artist from Monreale.[13] At Ravello, the ambo of the cathedral church, dated to *c.* 1130, is decorated with mosaics. One piece – a fragment really – shows Jonah swallowed by the whale. It is not, however, a glass mosaic, but is made from pieces of pottery which appear to date to eleventh-century Fustat in Egypt, specifically to 1025–1125.[14] In Ravenna, new mosaics appear in old mosaicked churches, perhaps as repairs, perhaps as

Table 10 Twelfth-century mosaics in Italy

Rome	Ravenna	Sicily	Other
c. 1113 S. Bartolomeo all'Isola	1112 Basilica Ursiana		
c. 1123 S. Clemente	Early 1100s S. Apollinare in Classe		1125 or 1156 SS. Maria and Donato, Murano
			c. 1130 ambo at S. Pantaleone, Ravello (inlay)
c. 1140 S. Maria in Trastevere		1143–70s Capella Palatina, Palermo	*c.* 1135 S. Giorgio, Ferrara
c. 1143 S. Maria in Monticelli		1143–51 Martorana, Palermo	
		1148 Cefalù	
c. 1161 S. Francesca Romana (S. Maria Nova)		1160–70 Palazzo Normanni	
		1170s La Zisa	
		1172–85 Palermo Cathedral	
		1180–90 Monreale	1191 Grottaferrata
1198–1216 St Peter's, S. Paolo (begun)			
			On-going throughout 1100s S. Marco Venice

replacements. This was the case at the Basilica Ursiana, the first mosaics in the city since the seventh century.[15] A drawing made before the demolition and rebuilding of the cathedral in the eighteenth century shows that the programme was unique among surviving mosaics. There was an Anastasis in the apse with scenes from the life of St Apollinaris below and assorted saints, and an Ascension on the triumphal arch, plus scenes perhaps with saints or prophets below. There may also have been some repairs at S. Apollinare in Classe and it is possible that parts of the S. Vitale mosaics may date to repairs made in the twelfth century.[16] In the previous chapter, I discussed how the mosaics at Ravenna appear to have influenced the mosaics of Torcello (which were also overhauled in the twelfth century), and it may well be that what is apparent is evidence for mosaic activity in both cities from similar periods, perhaps with mosaicists (not necessarily 'Byzantine') moving between the two cities to create and to repair their mosaics.

VENICE AND THE VENETO

There is no reason to suppose that there was any break in mosaic-making in Venice or the Veneto between the eleventh and twelfth centuries. The enormous programme at S. Marco (some 6,000 square metres) seems to have been the result of long and unending work, perhaps with pauses, perhaps with repairs and renovations. As I noted in the previous chapter, because virtually no documentation about these mosaics survives, any understanding of the programme has to reflect on the monumental work of Otto Demus, who set out to arrange the programme in a temporal sequence, based on their style, iconography and Demus' own acute eye for detail.[17] However much Demus' datings and attributions might be questioned at specific points, his general layout is probably correct. The present church was built between the 1040s and 1090s, and the mosaics cannot be any earlier than this; they were in a state of



Figure 136 Interior view of S. Marco, Venice: mosaics from the eleventh century to the present. The view is of the central dome with its scene of the Ascension. In the west vault, the arch to the right, are (from the top) the Anastasis, the Women at the Tomb, the Crucifixion and the Betrayal. In the south vault below the dome, the central roundel is not medieval, but the scenes visible below it are and show the Last Supper and, below that, the Washing of Feet. Demus dated this assemblage to different points in the late eleventh and the twelfth centuries.

more-or-less completion by the fifteenth century but went on being replaced, restored and repaired until the present day.[18] We might also assume (though this is more tendentious) that decoration was more-or-less linear within the church. Any reassessment of Demus' dating would, I think, shift the furniture but not significantly alter the shape of the room.

Demus ascribed a great deal of the mosaic programme to the twelfth century, seeing it as the most important period for mosaics in S. Marco as a whole.[19] He recognised that the decoration of the church was a continuing process, presumably more because of the size of the building than the cost, though this is never made explicit. In his scheme, the twelfth century was

a time for filling in the middle of the building between the eleventh-century mosaics of the apse and the west door (Fig. 136). Thus the mosaics of the five domes (part of the east dome – Emmanuel and Prophets around Virgin; central dome – Ascension; west dome – Pentecost; north dome – life of St John the Evangelist; south dome – four saints on a vast expanse of background), the vaults (south vault and its scenes from the life of Christ – Temptation and Entry; Last Supper and Washing of Feet; and the west vault with Passion cycle and Resurrection cycle), the transepts (life of the Virgin and Infancy of Christ), and the choir chapels (saints, Fathers, apostles, prophets) have all been placed in the twelfth century, as have the miracle scenes from Christ's life scattered throughout the church. Indeed the shape of the building makes it an awkward space for displaying a long sequence of mosaics in any order.[20] In this last case, there may have been as many as twenty-nine scenes in all, making it the largest surviving mosaic set of Christological scenes anywhere. Though all these areas of mosaic were identified as twelfth century, their sequencing, in Demus' view, was not linear. Thus, for example, he felt that, stylistically, the west dome came before the central dome, and that the unusual and very distinctive south dome should also be dated to the twelfth century.

It seems logical to accept the probability of much of the mosaic decoration dating to after the calamitous fire of 1106 and the subsequent need for rebuilding. But beyond questions of date, what were the mosaics of S. Marco for and about? They form a very large and complex set of images, one that came together over a long period of time and as a result of several fires and earthquakes. Consequently, they are perhaps not so much a coherent 'programme' as the result of a whole series of campaigns which both added to the existing decoration of the church and also adapted and changed it. There may not have been one 'master plan' followed throughout the twelfth, thirteenth and fourteenth centuries, but rather a series of doges and Council members working together on something of an ad hoc basis. Though Demus sought to relate the 'programme' to his model of eleventh-century Middle Byzantine church decoration, he acknowledged, however, that by and large, the two did not match. Instead, S. Marco was a Western Christian church and the liturgies and rites celebrated in it were Western and Roman. Consequently, the decoration, in terms of subject matter and location within the building, needs to be understood as acceptable and relevant to its Catholic, Venetian clergy and audience, and their religious practices, rather than in terms of a 'Byzantine scheme'.[21] In fact, what S. Marco shows is how much the Venetians wanted mosaic, the medium, itself, with additions to the structure built and mosaicked, windows blocked in, more and more added to the church, increasing amounts of mosaic squeezed in, visible or not, a gilding for the walls, a statement based on the medium perhaps more than the images.

The mosaics should not be seen in isolation away from the overall form and function of the building as a whole. S. Marco itself was a building of many significances. It was simultaneously the chapel of the doge, the state church of Venice and the shrine of St Mark. So there were both general and specific messages within the mosaics, some that were more temporally and person-specific than others, which had a broader more liturgical significance. The central theme of the mosaics, if there was one, was perhaps the oft-repeated fundamental Christian message of salvation through the mission and Passion of Christ, but St Mark, the patron saint of Venice, was the next hero of the church, his image running throughout the building in various ways, and his status as greater than Peter's consistently highlighted (it is Mark, for example, who is placed second to Christ in the apse). The dating of some of these

images, notably those showing the people of the city praying in the church for the recovery of Mark's body, surely relates to the actual recovery of those relics in *c.* 1100.[22] Western influences were central in shaping the content and message of the mosaics as a whole and the choices of saints reflected Venetian concerns.[23] Local saints and bishops such as Hermagoras of Aquileia and Nicholas, patron of the Venetian fleet, feature, and Western, not Byzantine, saints dominate the decoration. Certain parts of the programme seem to have had very specific meanings for their patrons. For example, the south dome presents four saints, Nicholas, Clement, Leonard and Blasius, identified by Latin inscriptions to either side of their heads, standing a little lost and lonely in a vast expanse of gold background, with four local female martyrs in the pendentives below.[24] These four Roman saints, however, relate to the eleventh-century Gregorian Reform Movement in Rome and so fit into the larger context of political and ecclesiastical relations between Venice and the papacy in the early twelfth century, plausibly serving at the time of their installation as a public statement of support for the Reform papacy.[25]

The same three elements as in the eleventh century seem to have influenced Venice's use of mosaics in the twelfth and indeed the thirteenth centuries. First was the local and regional. Predictably, the 'myths of Venice', the internal creation of a sacred history, continued to grow. S. Marco's twelfth-century mosaics, especially in the renewed emphasis on St Mark, extended the Early Christian history of the city. The second aspect was once again Byzantium and Venice's relationship with that power. So much of Venice's wealth and subsequent prestige came from its relationships with the empire. The twelfth century was when the Venetian Republic increasingly dominated trade and shipping in the Mediterranean, taking over much of the eastern Mediterranean in terms of trade both with Byzantium and with the Crusader Kingdom in the Levant. In the late twelfth century, in Constantinople itself there were something between 10,000 and 30,000 Venetians, enough for their own town.[26] And then there was Rome and the papacy, apparent immediately in the decoration of the south dome, but also as the mosaic work spread through the church in the implicit challenge to St Peter's.[27] But increasingly there was a further strand in the Venetian formulation of civic identity: the Islamic world, most notably the great antique metropolis of Alexandria, from where the relics of St Mark had been stolen. Islamic elements were incorporated into the city's fabric, from ornamental brickwork to glass technology, and this looking East may well have served to distinguish Venice from both Rome and Constantinople.[28]

As before, Venice was not the only island in the Laguna to invest in mosaic. Repairs and renovations, for such we assume them to have been, took place at Torcello. Here, the top two bands of the eleventh-century Last Judgement appear to be remakes (the Anastasis and the Crucifixion), as do the Virgin in the tympanum above the west door, the Virgin in the apse and the scene of the Annunciation on the triumphal arch.[29] A new mosaic was constructed in the church of SS. Maria and Donato on Murano: the church was completed by 1141 and it is possible that the mosaic – a standing Orant Virgin on a gold background in the apse – was completed by 1156.[30] The relationships of these mosaics and their artists are ambiguous but it seems plausible that the same local workshop or workshops could have met the demand in terms of workload.[31] They suggest a fashion for the medium in the local region, a local rivalry, but perhaps one also associated with the development of the glass industry in the region, of which Murano was increasingly the centre, making the medium relatively accessible.

ROME

Just as Venice did not see itself in isolation from Rome, so Rome too needs to be understood in a wider Italian context. There was an apparent lull in mosaic-making in Rome between the late ninth century (the apse of Rome's S. Marco) and the twelfth, though whether this indicates a complete cessation of mosaic activity cannot be established. However, it is in this lack of actual material that the way was opened for the 'Monte Cassino' solution discussed in the previous chapter, and for the supposed presence of Byzantine workmen working on the mosaic of S. Clemente (*c.* 1123).[32]

Although some have claimed that S. Clemente is the first surviving mosaic in Rome after S. Marco, this is not strictly accurate. A fragment depicting the head and shoulders of a bearded Christ, holding an open book inscribed 'I am the way, the truth and the life' and blessing with his right hand, from S. Bartolomeo all'Isola has been dated to *c.* 1113.[33] If a papal mosaic, this may have been the work of Paschal II, who was responsible for considerable rebuilding in the city after the Norman Sack of Rome in 1084, including the papal and titular church of SS. Quattro Coronati.

But considerably more mosaic than this remains in S. Clemente. This church is located between Classical and Christian Rome, being close both to the Colosseum and Forum and to the Lateran. The current building on the site, and its mosaic, are twelfth century, but they overlie a first-century Mithraeum, and an Early Christian basilica which was restored in both the ninth and the eleventh centuries (after Robert Guiscard's 1084 sack of Rome, which may have severely damaged the earlier church).[34] In 1099, this lower church served as the site for the election of S. Clemente's titular cardinal to pope, as Paschal II. For some unknown reason, the present church was very soon built on top of it, to the same basilica plan but at a slightly smaller scale, by a Cardinal Anastasius, titular of the church from *c.* 1099 until *c.* 1125/6.[35] Two inscriptions record that Anastasius completed the work of rebuilding S. Clemente, though a further inscription suggests that one Petrus was entrusted with the conclusion of the work.[36] The new church may have been consecrated at some point between 1118 and 1119, although this does not mean that the apse mosaic was finished by this date; however, it is widely accepted that it was completed by 1125.[37]

The mosaic is a complex design of about 117 square metres (Fig. 137 and see above, Fig. 1). A relatively small crucified Christ, flanked by the Virgin and St John, is enclosed at the centre of a vine scroll which grows from an acanthus in which the foot of the cross is rooted. The blue cross contains twelve doves within its outline. The vine scroll is filled with plant forms, with classicising vases, birds of different sorts, and scenes about the life of the church: the figures of four of the great Western Fathers of the Church (Ambrose, Gregory, Augustine and Jerome), flanked by secular aristocratic figures. Above the cross in the crown of the apse is an elaborate canopy of heaven from which the hand of God extends, bearing a victory wreath. Lambs stand on the capitals in the canopy and blue and red clouds fill the sky. At the base of the cross, a small deer nuzzles a jewelled band. Below, two deer drink from the four rivers of paradise. Along the bottom of the conch is a series of tableaux from 'everyday life' – a woman feeding chickens, a shepherd, a hunter. In the curve of the apse, an elaborate floral scroll snakes up to a blue monogram, not containing any donor's name but with the Early Christian Chi-Rho symbol with the Greek letters A and Ω, alpha and omega, dangling from it, signifying Christ himself. At the base of the apse, twelve sheep approach a Lamb in the centre, emerging from Bethlehem and Jerusalem either side of the triumphal arch (Fig. 138).



Figure 137 Apse mosaic, S. Clemente, Rome, twelfth century: the crown of the apse, with the canopy of heaven and the centre of the triumphal arch with Christ flanked by two of the four evangelist symbols. The eagle of St John on the right is the point of comparison with the Salerno mosaics (see Fig. 130).



Figure 138 Detail from the apse mosaic, S. Clemente, Rome, twelfth century. Above is a shepherd and his flock, a peacock and water fowl, and then deer drinking from the rivers of paradise flowing from the acanthus at the base of Christ's cross. Amidst the sprouting acanthus, a small deer is encircled by a specked band, seemingly a misunderstood serpent. Along the base of the mosaic, three apostolic sheep approach a central Lamb haloed in gold with mother-of-pearl inlays.

On the crown of the arch itself is a blessing Christ in a roundel, bust sized, in the centre, flanked by the four evangelist symbols. Below, to the viewer's left, stand Paul and Clement, and to the right, Peter and Laurence; in the next register, Isaiah stands beneath Paul, and Jeremiah beneath Peter. The whole design is set on a gold ground, with lots of blues and greens, a dazzling and bewildering visual effect, swamping the viewer in the amount of detail.

As a work of mosaic art, it is neither coarse nor a slavish imitation (as Demus suggested was the

case with Roman mosaics at this time) but magnificent. The detail on the canopy of heaven, for example, with the careful shading to create the sense of the canvas material held taut in the sunlight; the vignettes of daily life along the base of the apse, the birds scattered throughout, the luxuriant acanthus scroll, all create a sense of imagery bursting with life across the whole apse. There is a striking contrast between the small, suffering Christ on the Cross, flanked by his Mother and St John and the luxuriant vine scroll, a veritable tree of life, that fills the apse space. In its branches are contained the activities of the church; below it, mundane daily life. The mosaic is a superbly eclectic mixture of styles and iconographical elements, both Early Christian and medieval, but by and large taken from within Rome itself, parts taken but combined into something new and different. There are clear resonances of other Roman mosaics, from early examples such as the Lateran baptistery (the vine scrolling across the conch of the apse; the canopy of heaven) and SS. Cosmas and Damian (the sheep, the clouds, the evangelist symbols), both churches five minutes down the road, to later mosaics such as S. Prassede (more sheep, more evangelists). The scroll also contains many classical and classicising allusions such as putti riding on dolphins, playing among grapes or blowing trumpets. The mosaic evokes the Romanesque style in its emphasis on animal motifs, interlace and spiralling decoration and the desire to fill surfaces (encapsulated in the luxuriant inhabited vine scroll), and in the ways in which some of the figures are drawn: the use of sharp patches of colour on the cheeks of Mary and John at the Crucifixion; the heavy arched brows of the bust of Christ at the centre of the arch. Many of the details of the scenes of day-to-day activity suggest elements of contemporary life and dress. The deer and the jewelled band was perhaps the corruption of a scene showing a deer attacking a snake, a detail used in other images and taken from the well-known Early Christian *Physiologus*, a hugely popular text about the meanings and significances of different animals. Because of this, it has been suggested that this mosaic replaced and copied an earlier one in the church in the original apse of the Early Christian church.[38] This is possible but need not have been the case: the *Physiologus* was a consistently esteemed and widely read source throughout the Middle Ages.

The meanings of the mosaic must have worked on several levels, depending on how much attention and effort its viewers put in. The contrasting elements, Early Christian, Romanesque, Byzantine and Gothic, if used consciously and deliberately, rather than being an indication of different artists, may have served to make different points. The Early Christian, a key aspect in the papal Reform Movement, perhaps evoked the mosaic's place in the Christian and apostolic heritage of Rome (Clement himself, the patron saint, the fourth pope, had been consecrated by St Peter and martyred for his faith); the image of the dead or sleeping Christ, however, was much more of a twelfth-century representation, understood as a representation of Christ as Second Adam. The detail in the imagery, however, allows for multiple in-depth readings, based on theological disputes and political circumstances. It may be that there were strong and recognisable – at least to the clergy – Gregorian Reform messages contained within the imagery and the inscriptions, with the emphasis on monasticism and St Ambrose, for example.[39] It is possible that the image made reference to the papal schism of 1130–38, when two popes, Innocent II and Anacletus II, the ultimate loser who consequently ended up labelled as the antipope, were elected, though if the mosaic does indeed date to the 1120s, this is unlikely.[40] But the inscription running around the apse claims that the Church is the True Vine; the Law makes it wither and the Cross causes it to flourish, a sentiment accessible

to any Christian who would recognize Christ on the Cross as Saviour. Whatever the patron may have intended, it is unlikely that viewers extracted only one unchanging message from the image; rather its complexity seems to invite its audience to look and create meanings.

S. Clemente was an important titular church but it was not a papal church or a papal foundation. Cardinal Anastasius had succeeded Paschal II as titular cardinal, implying a level of papal favour, and he clearly commanded enough resources to have the church rebuilt and decorated. The centre of the apse held the bishop's throne, not the pope's, and the high altar formed another focal point of the church, both below the central axis of Christ, the Hand of God, the Crucifixion, the Waters of Life, the Lamb and the bishop. At S. Clemente, for almost the first time in Rome since the fifth century and S. Sabina, we see evidence of a churchman who was not the pope (though Anastasius was clearly a papal supporter) commissioning both a church and a mosaic. The former we know was not unique; the latter we can presume was also not unknown: it is unlikely S. Clemente was the only example of mosaic being used by high churchmen. Nonetheless, the church was not divorced from the pope. It had a place in papal civic ritual for he came to S. Clemente to celebrate the Lenten Station on the Monday after the second Sunday in Lent and in procession to the Lateran for the feast of St Mark.[41]

The next surviving mosaic in Rome is some twenty years later than S. Clemente. The façade and apse mosaics in S. Maria in Trastevere offer another iconography that looks as much to Rome as to anywhere. This church was an Early Christian foundation, perhaps from the fourth century, and another *titulus* church. Over the centuries, it had received considerable papal patronage. It was rebuilt in the eighth century by Pope Hadrian, who brought the relics of saints Callixtus, Cornelius and Calepodius into it. There was another large-scale reconstruction of the church by Innocent II (1130–43), retaining the basilica plan and taking material from the Baths of Caracalla.[42] He may have changed the dedication of the church to the Virgin. In the process, Innocent destroyed the tomb of his antipope rival Anacletus II and fitted the space up for his own burial. The mosaics may therefore fit somewhere into this scenario of papal rivalry.

The façade, perhaps earlier than the apse, depicts the Virgin and Christ in the centre, flanked by five figures on each side who may represent the Wise and Foolish Virgins. However, since there were seven Wise and seven Foolish, but here eight of the façade figures have their lamps lit whilst two do not, and all are crowned and haloed, this seems doubtful. The small figures of donors at Mary's feet are probably thirteenth century.[43] Inside, the apse mosaic shows Christ and his Mother seated on the same wide throne (Fig. 139). He is central, whilst she is off-set to the viewer's left.[44] He has his right arm around her and holds an open book; she holds a scroll and gestures towards him. She is crowned and dressed in jewelled robes vaguely reminiscent of imperial robes but actually an echo of the famous seventh-century icon of the Mother of God held in the church, which depicts Mary in jewelled robes and a crown with strings of pearls hanging from it. To the viewer's left, next to the Virgin, are three figures, Callixtus, Laurence and Innocent, at the far end (Fig. 140); to the viewer's right, beyond Christ, are four, attempting to balance the asymmetrical central pairing: Peter, Cornelius, Julius and Calepodius (their names are all below their feet). All, except Pope Innocent, the patron, are saints and martyrs of the Early Church and may have been connected specifically with S. Maria in Trastevere: the relics of at least three were held in the church. As the donor in the company of saints, Innocent holds a model of the church, a familiar motif. Above them, the Hand of God holds a wreath, coming



Figure 139 Apse mosaic, S. Maria in Trastevere, Rome, twelfth century. This view shows the central scene of the enthroned Christ at the centre of the apse, embracing his Mother. Pope Innocent is at the far left with a model of his church. Prophets and evangelist symbols fill the triumphal arch, and, below, Cavallini's later scenes from the life of the Virgin are visible, Annunciation, Nativity and Dormition being most obvious . The recurrent themes of so many Roman mosaics are apparent: the canopy of heaven above, the sheep and heavenly cities below, for example.

into view below a canopy of heaven set out with clouds and lambs, very like that of S. Clemente. Below, six and six sheep, emerging from the divine cities, herd towards the Lamb. On the triumphal arch, four evangelist symbols set in blue and red clouds flank a cross with alpha and omega and seven candlesticks (like Cosmas and Damian, Prassede, Cecilia, Clemente). Below them are two prophets, Isaiah and Jeremiah, as in S. Clemente, and below the prophets putti hold cloths bursting with fruits, a classicising motif, but also evocative of the putti of S. Clemente. The background to the apse is gold, and somehow this makes it a very vivid and clear image: most of the colours are both light and bright.

Although the associations with other Roman churches are clear, the iconography of Christ embracing the Virgin is different. It may derive from French (Gothic) images of the Coronation of the Virgin or it may, since Christ does not crown his Mother in the mosaic here, be a reference to the Song of Songs, with Mary representing the Church, the Beloved of the Song, and to the popular Roman celebration of the Feast of the Assumption of the Virgin.[45] This representation of Mary gave a twelfth-century twist to some very familiar imagery that placed the pope himself as patron with the saints in the presence of Christ and his Mother. Incidentally, S. Maria in Trastevere need not have been Innocent II's only mosaic commission: he may



Figure 140 Detail of the central section of the apse mosaic, S. Maria in Trastevere, Rome, twelfth century. Christ's hand behind his Mother's shoulders is visible; she is dressed as a queen or empress, and both his and her robes shimmer with gold.

also have been the patron of the mosaic of which only the bearded bust of Christ in the centre of the apse of S. Maria in Monticelli survives.[46]

The final remaining apse mosaic from Rome is some thirty years later. The church of S. Francesca Romana, located in the Forum (originally, until the sixteenth century, known as S. Maria Nova to distinguish it from the other Forum church of S. Maria Antiqua, abandoned in the ninth century) was built in the tenth century, incorporating an eighth-century oratory in the portico of the Temple of Venus and Roma. Pope Gregory V (996–9) brought relics in from the suburbs to the church to protect them from Saracens. The church was rededicated by Pope Alexander III (1159–81) in 1161 and the apse mosaic is conventionally dated to this restoration – whether it was modelled on any previous decoration is unknown.[47] The façade mosaic (now lost but which depicted either an Ascension or a *Maiestas Domini*) may have dated to the same commission, or it may have been thirteenth century.

The apse of S. Francesca Romana features an enthroned Virgin and Child (Fig. 141). She is elaborately dressed in a blue robe with great sweeping sleeves and sumptuous gold, red and blue ornament, and crowned, and the throne itself is rather elegant. Her Child, in gold, is shown like a miniature man, striding out across her chest (Fig. 142). James and John are located to the viewer's left, Peter and Andrew to the viewer's



Figure 141 Apse mosaic, S. Francesca Romana (S. Maria Nova), Rome, twelfth century. The centrally placed Virgin gestures towards her leaping Child. The canopy above is placed above a cornice (think of the Lateran Baptistery) supported by gold bricks, and the saints are isolated in their columned arches.



Figure 142 Detail of the Virgin and Child from the apse mosaic, S. Maria Nova (S. Francesca Romana), Rome, twelfth century.

right, all standing on little mats, as they do at S. Marco in Rome and in S. Maria in Trastevere. Noticeably, as at S. Maria in Trastevere, but not S. Clemente, Paul is absent. Above is the canopy of heaven with the Hand of God descending with a wreath, red and blue clouds, but no lambs; instead, vases are used. The saints and the Virgin are set in arches with brickwork above, separated by columns, almost like Late Antique sarcophagi in design. The decorative scrollwork in the inside face of the arch is very different from that of S. Maria in Trastevere and indeed to S. Clemente. S. Francesca also now lacks its sheep at the base and the mosaics of the triumphal arch, though these once existed.

The mosaic has never really been highly praised by art historians, especially in comparison to that in S. Maria in Trastevere. The figures tend to be described as quite solid and chunky in appearance; almost inevitably, the Virgin has been described as 'provincial'.[48] It deserves better than this. As a papal commission, presumably the pope had a choice of artists and even played a role in the design. That *we* do not rate the mosaic as highly is a different matter and perhaps shows our

giving of undue weight to perceived stylistic differences (specifically 'Byzantine' versus 'Romanesque') as dictating the quality of an image. If style terms are to be used, Mary and her Son do appear more Romanesque in appearance than anything else, with the arching brows that go on to form a continuous line in modelling the nose, and the depiction of the drop-sleeves of the Virgin's dress. But this is not necessarily a bad thing or indicative of a lesser quality. Subjectively, the detailed spiralling Romanesque folds shown on the clothes of the saints are attractive and the little labelled mats are very appealing. Seen in the church, in its setting, picking up light, this is actually a very striking mosaic, a mix of 'Roman' elements and what were surely trends current in other forms of art in the period. The iconography too reflects many aspects of earlier Roman mosaics: canopy; hand; clouds; saints and mats. The Virgin's pose is an intriguing one, almost a cross between the idea of an enthroned Mother of God and Child, with additionally Mary portrayed crowned and in rich robes (S. Maria in Trastevere), and the image of the Virgin Hodegetria, 'She who shows the way', in which Mary gestures to her Son as the path to redemption. Such a representation is familiar from icons but had also been used in mosaic in the previous century at Torcello, suggesting that this combination here would not have been strange to a Roman audience.

The centrality of Christ and his Mother in both S. Maria in Trastevere and S. Francesca Romana picks up on images used earlier in Rome and indeed common in a variety of media throughout the Christian world in the Middle Ages. But all three of these twelfth-century churches have Western elements to their iconography as well as distinctively Roman ones. The most obvious is that Mary in both S. Maria in Trastevere and S. Francesca Romana wears Western-style dress and is crowned: in Byzantium in the twelfth century, the Mother of God was dressed simply and never depicted with a crown. What the apparent differences between S. Clemente, S. Maria in Trastevere and S. Francesca Romana may represent are different Roman artists (or workshops) operating in a thirty-year period, and that, in its turn, implies a flourishing (if possibly small) mosaic industry in Rome.

The same is true of the few fragments of twelfth-century mosaic that survive from Old St Peter's. Innocent III (1198–1216) repaired the apse mosaic there before his death in 1216 and inserted himself and a figure representing the Roman Church, *Ecclesia Romana*, into it: their heads, and a dove, survive. *Ecclesia* especially, perhaps because of the imperial-style crown she wears, has been seen as highly Byzantinising – as well as containing Roman, Venetian and Sicilian style elements, though she is not that far from the Maria Regina of S. Maria in Trastevere.[49] In contrast, the remains of a three-quarter-length small panel of the Virgin and Child from S. Paolo *fuori le mura* show her dressed in a blue maphorion, like a Byzantine Mother of God, and she and her Child hold the Hodegetria pose.[50] But this too would have been a familiar enough image in Rome, visible in some of the most sacred images of the city, icons such as the *Salus Populi Romani* from S. Maria Maggiore or the Madonna in the Pantheon, and echoed in the S. Francesca Romana apse. The mosaic image is labelled as 'Mother of God' in Latin, emphasising her Roman connection. All three of these fragments use unshaded red patches to model the cheeks of the figures. This has been interpreted as a stylistic element derived from Torcello and S. Marco, and hence and indirectly Byzantium, as with the subtle pink cheeks of the the Zoe panel in Hagia Sophia or the more blatant lines on the face of Eirene in her image in the same church. But it is a stylistic device also visible in S. Clemente (for example in the faces of the small figures of the acanthus scroll), on the putti inside and the

female figures outside S. Maria in Trastevere, and on the Christ-Child in S. Francesca Romana, so it may be as much an Italian (Roman) feature as obtained from Venice or the empire. Such highlighting is certainly also a feature of Romanesque painting. But even if we could pin down such details to a point of origin, where does that get us? What these purported style distinctions reveal is indicative of a heterogeneous and wide-ranging conglomeration of elements, most of which can already be found in a Roman context. S. Maria in Trastevere, for example, in its architectural form and use of *spolia*, has been identified as a translation of fifth-century churches such as S. Maria Maggiore into a twelfth-century milieu, perhaps also associated with an increased papal interest in Constantine and his – supposed – role in the transfer of imperial power to the pope.[51] So it might be better to consider these mosaics as a Christian art form borrowing from the latest trends and fashions available in the pictorial arts more widely, as well as making reference to the glorious past.

What these mosaics also point towards is a continuation of the tradition visible in earlier centuries of the appropriateness of mosaic as a medium for, in particular, papal churches. These surviving mosaics from twelfth-century Rome can all be seen as made for very Roman, Western ecclesiastical contexts, often with papal connections, and with associations and visual links to other images and mosaics within the city. In this tradition of papal munificence and power, throughout the century, the great Constantinian basilicas all had their mosaics renewed, though little physical evidence of this now survives. I have already mentioned Innocent III's insertion of himself and the Church into the apse of St Peter's no less. Innocent also provided money for the mosaics of S. Paolo *fuori le mura*, and in the early years of the next century Pope Honorius commissioned repairs on the same church.[52] At the Lateran, mosaics were put in the audience hall of Callixtus II (1119–24) and a portico and entablature with mosaic frieze were added to the east façade, with messages of papal triumph over the antipopes, perhaps by Alexander III or Clement III.[53] What S. Maria in Trastevere and S. Francesca Romana also reveal is something that became an increasingly popular and distinctive phenomenon in Italy: the use of mosaic on the façade of a church.

'Byzantium' has too often been hopefully bracketed with mosaic art in Rome in this period but twelfth-century Rome was not on particularly good terms with the Byzantine Empire. The schism of the eleventh century had never been healed and papal political manoeuvrings in Italy, especially in looking for support from Norman Sicily, were not well received in the empire. Rome also had other issues to contend with. Gregory VII's claims of papal supremacy and ecclesiastical reform and the consequent struggle with Emperor Henry IV meant that the twelfth century was dominated by the conflicts between a series of popes and antipopes, at odds with both the Holy Roman Empire and the Byzantine Empire for much of the period. Both Innocent II (S. Maria in Trastevere) and Alexander III (S. Francesca Romana) were recognised as pope but challenged by antipopes. Innocent was almost universally accepted but Alexander had been under far greater pressure – he had had to withstand a challenge from the antipope Victor IV, backed by the Holy Roman Emperor Frederick Barbarossa, but by 1161, his legitimacy was increasingly recognised across Europe.

Both were vigorous reforming figures, however, keen to consolidate papal authority. We should understand their patronage of mosaics in this context: the apostolic nature of both mosaics, and the emphasis on early popes, reinforcing papal claims as the successor of Peter and Vicar of Christ. Endeavours to relate them to 'Byzantium' and 'Greek artists' seem rather

pointless: the mosaics of all these churches are Roman and best understood in that context.

In fact, of the three major areas of twelfth-century mosaic-making in the West, Rome is the one where scholars have been most dismissive of the Byzantine associations, seeing the mosaics as poor in quality because of their lack of Byzantine style: 'a few works in a coarse technique and in almost slavish imitation of earlier decorations', in Demus' phrase, and this despite the supposed efforts of those mosaicists from Monte Cassino in the later eleventh century. I would take issue with any decription of these mosaics as lacking quality (look again at S. Clemente) and suggest rather that it is the type of image shown that has caused some scholars to take against them. Kitzinger and Demus both had an agenda to use non-Byzantine mosaics to recover the mosaics of the Byzantine world, and those of Rome offered them the least material in this endeavour.

SICILY

In contrast, the third centre of mosaic-making in the twelfth-century West, the Norman kingdom of Sicily, offered the most, and the mosaics of Sicily are consistently perceived as 'Byzantine' and by 'Greek mosaicists'. Before engaging with this, however, it is worth looking at what the Norman Sicilian mosaics actually were.

In contrast to Rome, where the patronage of mosaics is scattered over the entire century (the implication of that being that there was more of it than has survived across the whole time period), in Sicily the use of mosaic seems part of a clear and defined regal programme of assertion and cultural claims, a part of the agenda of those Norman kings of Sicily who ruled between 1130 and 1189. Surviving mosaics come from the palace chapel of the kings in Palermo (the Capella Palatina has a date of 1143–1170s), a chapel of an important court official in the same city (the Martorana of 1143–51), and the cathedral of the capital (1172–85), from palaces (the Palazzo dei Normanni and La Zisa dated to *c.* 1160–70), and from the two major kingly churches of the island (Cefalù of 1148; and Monreale, 1180–90). More mosaics from the same period are known to have existed, at Messina for example, and at Gerace.[54]

The Norman Kingdom, which also included much of southern Italy, was established in 1130 and lasted only until 1194. Previously, between *c.* 831 and *c.* 1072, after its conquest from the Byzantines, Sicily had been an emirate, an Islamic state, with a ruler based in Palermo. It had been a wealthy state: Palermo, with a population of some 150,000, was one of the largest cities in the Mediterranean, and it had been a multi-cultural state: Christian and Jewish communities on the island survived throughout the emirate.[55] In the tenth and eleventh centuries, however, warring southern Italian rulers, Byzantines and Lombards alike, hired Norman mercenaries to help out in their struggles against each other and against the Muslims. One of the most successful of these was Robert Guiscard, that same Robert Guiscard who had come to the aid of Pope Gregory VII and sacked Rome in 1084. Among his other triumphs in southern Italy, Robert had taken Sicily from the Arabs, after which Pope Nicholas II had created Robert duke of Sicily and Robert in turn had handed Sicily to his brother Roger, to rule as count in 1071. Count Roger (1071–1101) completed the conquest of Sicily by 1091.

It was Roger's son, Roger II (1105–30 as count, 1130–54 as king), who created the Norman Kingdom of Sicily and was its first and perhaps most successful king. Roger II was a supporter of the antipope Anacletus, who crowned him on Christmas Day 1130. However, in 1136, the pope, Innocent II, allied with the Holy Roman Emperor, Lothar III, and with the Byzantine emperor, John II Komnenos,

invaded the mainland Italian territories of the Kingdom of Sicily. In 1137, Lothar turned against Innocent and then died suddenly. Innocent excommunicated Roger in 1139 but was himself captured by Roger's armies and forced to acknowledge Roger as king. Roger, with his admiral, George of Antioch, was successful at sea against both the Arabs and the Byzantines and succeeded in establishing Sicily as a major force in the Mediterranean, possibly the most important sea-power in the region, though the Venetians might have had a view about that. Roger was succeeded by his son, William I (1154–66), who maintained the kingdom in the face of internal revolts, and was in turn succeeded by his son, William II (1166–89), whose reign was commemorated as two decades of peace and prosperity. William left no heirs and the kingdom gradually fell apart and was acquired by the Hohenstaufens and Frederick II in 1194. Sicily was throughout this period a multi-confessional and multi-lingual state, occupied by Muslims and Latin and Orthodox Christians, one in which Arabic remained one of the languages of government, though the Norman kings and their churchmen aimed to convert the island to Latin Christianity. What happened in Sicily during this period of the three Norman kings stands in sharp contrast to 'before' and 'after'. This clearly definable 'Norman' period seems to have been when Sicily was at its height in terms of Christian power, prestige and wealth, all on the back of military might. The buildings and works of art associated with the three Norman kings are of an unprecedented scale, magnificence and quality, and served to advertise them as forces to be reckoned with, serious power-players in the region – art as propaganda on a considerable scale. It is into this context that the mosaics should be fitted and any Byzantine elements understood.

The earliest existing mosaics are those of the Cappella Palatina, Roger II's palace chapel, and of the Martorana, the church built by his admiral, George of Antioch. The chronological relationship between the building and decoration of the two is disputed: art historians have debated long, hard and ultimately inconclusively about which influenced which.[56] In many ways, it does not really matter whether Roger got the idea from George or vice versa: what is important is that both thought mosaics were a good idea, and the reasons for that choice are worth exploring.

The Norman royal palace was based around the emir's palace in Palermo, but greatly expanded it. There must have been some sort of chapel there in the early twelfth century before Roger II commissioned his. Roger's chapel appears to have been built between 1132 and perhaps 1140, though a mosaic inscription around the cupola gives 1143 as the date of consecration.[57] The mosaics were presumably part of the plan from the start, so these dates must also relate to their making. The architecture of the chapel is an interesting hybrid. The building is essentially a standard basilica with a nave and two aisles and an apse at the end of each of these three elements, but with a domed choir or sanctuary and two transepts. This combination of a centralised and a longitudinal plan reflects Western architecture but also Byzantine and Muslim influences. In many ways, it was a synthesis of architectural forms from the island itself. Only the east end is vaulted, in a form that has been described as splendidly Saracenic.[58] The high drum of the dome and the angular squinches are architectural features which recur in Sicily.

The chapel is a small building; it is also a fantastically full building, packed with gold and imagery, reflecting light, bedazzling and disorienting (Fig. 143). It is very hard to keep focused on one part without being distracted by details elsewhere, for in addition to the mosaics, the building was lavishly decorated with marbles, sculptures and paintings in a variety of different



Figure 143 Inside the Cappella Palatina, Palermo, twelfth century. This image of the south wall and base of the dome with its angular squinches shows how the mosaics are crammed together into the space, creating a vibrant and colourful scene.

styles. The mosaics cover the entire upper part of the building above the socle and the capitals in the nave. Angles and corners are rounded to link walls, and no secondary architectural features, such as the half columns attached to some walls, are allowed to get in the way of this constant flowing surface. The programme is continuous and largely uninterrupted. Christ Pantokrator, blessing and holding an open book, is in the apse. Below him is a single row of figures, with the Virgin, a horrible, remade mosaic, in the centre, and, to the viewer's left, Mary Magdalene and Peter; to the viewer's right, John the Baptist and St James, an interesting combination of figures. The vault of the presbytery contains the Empty Throne and two archangels, both hinting at heaven and of things to come in the shape of the Last Judgement. Below are single figures of popes Gregory and Sylvester. The arches of the central square have the Annunciation on the triumphal arch with prophets below, opposed by the Presentation. Evangelists are in the squinches and runs of saints and prophets in the same area.[59] The south apse has Paul in a Pantokrator-like pose and three saints below him; the Nativity; Pentecost in the vault; saints and prophets are on the walls; and the Gospel cycle continues on the south wall of the south transept with Joseph's Dream, the Flight into Egypt, Christ's Baptism and Transfiguration, the Raising of Lazarus and the Entry into Jerusalem. The north transept has lost some of its decoration, though the Ascension in the vault and figures of saints survive. The inner arched wall of the nave has an Old Testament cycle running from the Creation to Jacob and the



Figure 144 Scenes from the life of St Paul, and a view of the ceiling, the Cappella Palatina, Palermo, twelfth century. The *muqarnas* ceiling is visible at the very top; below are scenes of the Creation; then below again, other Old Testament images including the Tower of Babel and Abraham entertaining angels. Below, on the outer walls, are scenes from the life of St Paul.

Angel, and lots of saints (there are at least a hundred saints depicted in the chapel); the outer walls of the aisles show scenes from the lives of Peter and Paul (Fig. 144). The west wall has the royal throne against it, and above that a panel showing the Pantokrator, Peter, Paul and archangels.

These mosaics have undergone a great deal of repair and restoration, even in the twelfth century: it is not clear how much of the nave is original and the aisles appear to have been repeatedly restored.[60] Consequently there has been a lot of debate about how the mosaics work as a sequence, if indeed they do so or were meant to do so, and 'restoration' serves as a convenient explanation for those areas that do not fit any master plan. Demus suggested that only the cupola was in place in 1143.[61] He argued that Roger's mosaic blueprint, for the east end of the building at least, the cupola, central square, apses and parts of transept, was for an apocalyptic cycle in the cupola, the Virgin in the apse, Peter and Paul in the side aisles, and the Christological cycle plus Church Fathers in the transepts. However, so he went on to argue, William I made amendments to the plan after Roger's death that involved inserting a 'royal box', a royal viewing space on the north wall in the transept, and then adjusting the mosaic programme to fit the new sight-lines needed for the box: the Virgin had to be made visible, and the wall opposite adjusted, causing details from the Christological cycle to be lost.[62] William II then changed things further by putting a throne at the west end and having the mosaic above it made. Demus also believed that some of the mosaics of the Cappella Palatina (the Christ Pantokrator in the apse, the mosaics of the south transept and the Church Fathers, for example) were so similar to those at Cefalù that the

same workmen must have been involved, but that they must have been made later (the mosaics at Cefalù are dated *c.* 1148). But because the lower part of the south wall looked significantly different, as did the Baptism, Transfiguration, Raising of Lazarus and Entry into Jerusalem, these must therefore all have been made by different artists and at a different date.

These are very complicated contentions, based on close-up and detailed readings of the visual material and an interpretation of stylistic differences that takes changes in style as indicating changes in both artists (or workshops) and time period. Both of these are problematic assumptions, since we have no idea of the scale of the workforce at the Cappella nor the time that it took. The implication of Demus' arguments is either of a campaign of decoration that took a good thirty years or more to complete or of a series of changes and alterations to the overall design of the building involving an almost unceasing adjustment and readjustment of the mosaics, and almost constant scaffold and mess over a very long time.[63] I wonder if too much weight has been laid on the perceived stylistic differences between the transept and the nave. These are always said to be the result of a series of campaigns, but there could equally have been one campaign and several teams of artists. Indeed, Beat Brenk argued that, because the scenes in the presbytery and aisles were laid overlapping the corners, they must have been sequential, made in a short space of time and to a design. He saw a master plan existing for a complete decoration of the presbytery, nave and clerestory from the start of the work, pointing out that the uninterrupted ornamental band separating the two registers of Old Testament scenes runs from the nave to the west wall; that consequently there must have been scaffold in the nave and presbytery at the same time and so the scenes and the ornament were installed together. Further, the central nave mosaics must have been done *c.* 1143 because then the mosaicists could have used the same scaffold already in place for the roof.[64] This seems to me to make sense. Thirty years to complete the work in such a small chapel (the building is perhaps 35 metres long from apse to narthex and about 16 metres wide) seems a little far-fetched, as does the idea that it was the palace chapel that was kept in such a constant state of flux, a chapel that we believe to have been central to the royal palace. As the royal chapel, surely it was imperative to get it finished and suitable for use as quickly as possible?

This is not to say that William I and William II could not have altered the layout and indeed the mosaics, but it remains questionable as to how much alteration took place when and over how long a time. As with S. Marco, it may be wrong to assume that the entire endeavour was guided by a unitary design right from the start and that Roger II's Cappella Palatina and his use of it were the same as his son's and grandson's. Demus' arguments also have his belief in an ideal plan of the Middle Byzantine church lying behind them: many of his concerns and explanations perhaps owe as much to an implicit wish to understand the programme in that context as to see it in its own right.[65]

But if the chapel is considered on its own terms, it needs to be understood as the religious centre of the palace, a place where the Catholic Mass was celebrated, and potentially a place for other royal rituals and events. In this regal context, the alignment of the images in the sanctuary, which run along a viewing line of north to south rather than east to west, do seem to match up with the remains of a balcony on the north wall which communicated with the royal apartments – thus an arrangement for the king's benefit (and this may have been part of the original design or a later adaptation).[66] The throne on the west wall of the nave, locating the king immediately below Christ flanked by Peter and Paul, perhaps in reference to Rome and St Peter's, is another

point in which the royal presence dominates.[67] This throne might well have presented a problem with the altar when the chapel was in use, for attention in the building would have focused on the east end, forcing the priests and congregation to have their backs to the king, and so it might be that the throne was related to changes in the building and its use, possibly as some sort of reception hall. Indeed, it may well have been the case that the chapel had a dual function as both a religious space and a space for kingly use, and that its focus might have shifted depending on the role.[68] Did the king perhaps celebrate the liturgy within the sanctuary, perhaps from his balcony, and then descend to earth to meet and greet his court in the nave? The nave itself has a spectacular vaulted roof of cedar wood executed in the *muqarnas* technique (a technique creating a honeycomb-like appearance) fashionable in the Islamic world; it was gilded and painted with dancers, musicians and drinkers, looking like courtiers, and it surmounts the Old Testament cycle on the wall below, the worldly atop the spiritual.[69]

However it worked and was emended and altered, the Cappella Palatina had a specifically royal function and its mosaics related to that, but a wider point is that of why Roger used mosaics at all. It must stem from his position as first Norman king of Sicily. As such, he had a point to prove, to establish himself and his rule as king as legitimate, supported by God, his position as no less important than that of the rulers around him, both locally and internationally. In the 1130s, having backed the antipope, he had a fraught relationship with Pope Innocent II, who allied himself with both the Holy Roman Emperor and the Byzantine emperor to attack Roger, but was compelled in the end to accept Roger's sovereignty. The Byzantines saw southern Italy as theirs, and Roger launched several successful raids against the empire (on Corinth and Thessaloniki, for example) and indeed against Constantinople itself. In this context of proclaiming himself as a monarch equal to other monarchs, then if mosaic was a Christian *lingua franca*, a common language, of power, authority and piety, it made sense for Roger to adopt it himself. If Rome had mosaics, and Cairo, and Constantinople, then Palermo needed them too. So the decoration and programme of the Cappella Palatina must, in the first instance, have reflected something of Roger's royal wishes and his idea of a palace church for his dynasty, the religious sanctuary of his court, where he campaigned to get and keep God on his side.[70] They were mosaics of royal propaganda on behalf of the kings in the specific political context of Norman Sicily. Like Manuel II Komnenos, Roger promoted his own royal image, with three or four at least known: at Messina, panels on the west façade of the cathedral depicted Roger and his successors; Cefalù too had royal panels on the western façade of the church, showing the kings from Roger II to Frederick II, and plausibly added sequentially; and there were at least ten further monumental images of Norman and Hohenstaufen rulers in Messina and in Gerace across the water in south Italy.[71] Roger's concern was, through whatever means, to assert himself politically as the equal of other rulers, be they emperors (Byzantine or Holy Roman), popes, caliphs or kings.[72] His successors were as keen to display their standing and lineage.

Built at much the same time as the Cappella Palatina, the small Martorana (it is 12.5 × 12.5 metres externally), the Church of the Admiral, in Palermo, offers only a slightly different take on mosaics. It was founded, built and endowed by the staunchly Christian George of Antioch, Roger II's admiral. George was the son of Syro-Greek parents. He and his father both served under the Emir of Al Mahdia (Tunisia), but in 1112 George entered Roger's service. By 1132, he was the king's equivalent of the grand vizier of the caliphs. George probably died around 1151, three years before Roger.[73]

The church is dedicated to Mary and has a deed of endowment dated to 1143: this asserts that the church was built by George to thank the Virgin for her support. It was a nunnery of Greek nuns and clergy, though it was unusual for a man to found a nunnery. It was also a private, personal foundation, though the church seems to have been accessible to a wider public than just the admiral and the nuns: in 1184, the Arab traveller Ibn Jubayr visited it.[74] It is apparent from the foundation document that the church building was more or less complete by 1143, though parts such as the atrium and portico appear to have been added after 1146. It was designed essentially as a cross in square church, a form popular in Sicily as well as Byzantium, and elements of the construction and decoration, notably the pointed arches and vaults, are very Sicilian in appearance.[75] Fatimid elements are also present, for example in the wooden frieze at the springing point of the dome and in some of the external decorative details of the church such as the frieze inscription and its crenellations and the plaster window grills with their geometric ornament.[76] So in many ways, like the Cappella Palatina, the Martorana belongs to local building tradition in terms of style, structural and constructional solutions and building techniques.

The mosaics originally must have covered all the wall space above the (largely lost) marble revetments, including the vaults of the inner church. There may well also have been mosaic in the atrium and portico. The focal point is the cupola, for most of the mosaics can be best viewed from the central square (Fig. 145). There is a bust Pantokrator in the cupola, holding a closed book. Four archangels crawl awkwardly around him in the outer ring: their pose is perhaps affected by the architectural space they are set in, though Demus suggests they should be understood as performing a standing reverential *proskynesis*. The hemisphere of the cupola rests on a wooden frieze bearing the text of a Greek hymn in Arabic. The drum of the cupola contains eight full-sized prophets, the squinches have the evangelists, and there are scenes relating to the Virgin throughout the church: the Annunciation and Presentation in the Temple in the transept; the Nativity of Christ and Death of the Virgin on the vault of the western cross-arm. The parents of the Virgin, Joachim and Anna, are in the side apses, implying that the Virgin herself was in the main apse. And an assortment of saints – Fathers, warriors, martyrs, deacons and apostles – are distributed throughout the church. Two dedication images, probably originally located in the inner narthex, survive.[77] One shows Roger, identified in Greek as 'Ρηξ', a transliteration of the Latin 'rex', 'king', and dressed almost as a Byzantine emperor, crowned by Christ. This was a highly visible statement of the king's power and standing that borrowed from Byzantium (though technically Roger's dress is closer to that worn by tenth-century emperors than those of the twelfth century, and so was a little old-fashioned, a point that might have interested the Byzantines more than the Normans).[78] The other panel shows George kneeling before the Virgin; she holds a scroll of ten lines in Greek, a plea addressed by her to Christ on George's behalf. The mosaic has been terribly restored and poor George in his elaborate cross-hatched robe looks more like a turtle than a man (Fig. 146).[79] This commemoration of the donor is a not unusual one. It is the presence of Roger's image in the context of the Martorana that seems odd: why was the Martorana used to make a declaration of Roger's power? It is possible that the two images were paired and that they show a flow of power and authority: Christ to king, then king's minister to Virgin to Christ. Roger's presence may serve to underline George's standing.[80]

The programme has been interpreted as an abridged edition of that of the Cappella Palatina and as making reference to the 'classic schema' of the Middle Byzantine church.[81] It seems more



Figure 145 Dome mosaics, with the awkward angels crawling around Christ, and below a range of saints cascading down the vaults, Martorana, Palermo, twelfth century.

likely, given the dedication of the church, that it was designed with the Virgin in mind and in order to make reference to her, rather than to the palace church. The relationship of these two buildings and their mosaics has been hotly disputed. Demus believed that the mosaics were done between 1143 and 1151, and that because the space was small, they could have been completed relatively quickly. They thus overlapped with the Cappella, though in this scenario George was clearly more effective than the king in getting the workmen to complete the job, and with Cefalù.[82] Kitzinger too saw the two buildings as having a close relationship, at least iconographically, but he held that the Cappella Palatina and the Martorana involved two different workshops.[83] Perhaps, but two such elaborate chapels in such close proximity, both spatial and temporal, paid for by the king and his minister, are unlikely to have been built and decorated in isolation from each other; it is perfectly possible that they shared workmen, artists and resources. Equally, George, in the use of mosaic, marble, wood, sculpture and inlay, and all the rest of the decoration, was clearly prepared to pull out all the stops to make his church magnificent. But one was the royal chapel and the other more of a votive offering to the Virgin, soliciting her intercession (seen in the image of George and the Virgin) and thanking her for her support.

The third mosaic programme of Roger's reign is that of the cathedral of Cefalù, about 70 km from Palermo. Here, between 1131 and about 1148, Roger built a large distinctively Norman church, a Romanesque basilica with three aisles and a transept in essence, though with some



Figure 146 Horribly restored mosaic panel showing George the Admiral kneeling before Mary, Martorana, Palermo, twelfth century.

elements of Sicilian architecture about it.[84] Although it was said to have been built in fulfilment of a vow after Roger was saved from a storm at sea, and was intended as a mausoleum, it was also the church of a new bishopric, created by the king for political reasons, and aimed at Pope Innocent II. An inscription on the apse claims that the mosaic work was finished in 1148: whether this refers to the apse alone or to all the mosaics in the church is a vexed issue.[85] Indeed, it has been suggested that Roger actually lost interest in the church because the decoration of the side apses was never begun and the work in the presbytery was not completed.

In the apse, Christ is pictured as Pantokrator, holding a book with the same text in both Greek and Latin, and with a Latin inscription (Fig. 147). The curved wall of the apse has three zones of mosaic. The two lower ones show the twelve apostles; the upper one, a larger-scale Virgin Orans escorted by four archangels. The apse is framed with columns covered with mosaic. The walls and vault of the first bay of the presbytery are also covered with mosaic. There are four sections to the vault and each holds a six-winged angel; the side walls have figures in horizontal strips like those of the apse. Below the vault, the upper register consists of a lunette containing a medallion in the centre and two standing figures, then a register of Old Testament prophets, and finally a register of assorted saints.[86] On the outside of the west wall, royal portraits in mosaic were placed, starting with Roger himself.[87]

Once more scholars are undecided about dates and who did what when. Demus and Lazarev agreed that the lower registers of the presbytery dated to the 1150s to 1160s, and Demus saw the vaults as similar.[88] He suggested that the mosaics of the apse were made by Roger, completed in 1148, and were the work of Greek mosaicists. After Roger's death, William I was responsible for the rest, and the Greek craftsmen were replaced by (not as good) Sicilians. This is, as so often, predicated on an assumption that a perceived change in style must mean a change in artist and a change in time, whereas it might simply mean several different groups of artists working simultaneously on one monument. As noted earlier, Demus was eager to relate the artists of the Cappella Palatina with those of Cefalù, perhaps feeling that three separate groups of Byzantine artists from Constantinople working in Sicily between the 1130s and 1150s might be excessive. But what about the mosaics in terms of their presence in Roger's Sicily rather than the origins of their artists? Their style may have evoked Byzantium (even if not made by Byzantines) to their Norman viewers but, if



Figure 147 Apse mosaic, Cefalù, twelfth century. Christ's book is inscribed in Greek and Latin, whilst the inscription round the apse is Latin alone. Is this the work of the same artists as at the Cappella Palatina?

they did, it was for a reason beyond the aesthetic. Cefalù, founded by Roger in a public challenge to papal authority, was a statement of intent. Its basilica spoke to the great basilicas of Rome and its mosaics were surely a signal of Norman ability to match Roman magnificence and piety. If the mosaics were seen as looking different in any way, that too may have been a part of this process.

Outside of all this ecclesiastical mosaic, the medium was used in at least two rooms of Roger's palace in Palermo, though they have proved almost impossible to date with any precision.[89] In part, this is because they are so different in appearance from those of the Cappella Palatina. In the so-called Stanza di Ruggiero ('Roger's Room'), also known as the Sala Normanna, mosaics cover the upper part of the room – the walls, arches and vault from springing of arches. They take the form of circular medallions with animal motifs. The east and west side walls are almost identical: deer, archers and running dogs in pairs separated by trees. The lower register differs on the two walls: the west wall has peacocks (modern), swans, and a probably recent door; the east wall has lions and palm trees. All are arranged symmetrically, almost heraldically. Opposite the door are centaurs shooting arrows, leopards and peacocks. The colour range is green, gold, pink and blue. Fragments in the Sala dei Armigeri in the Torre Pisana of the palace – a water bird, hooves, walls and ornamental scrolls – also survive.[90] These two rooms are the only parts of the palace to have any mosaic decoration, but there is no reason why there could not have been much more.

A later palace, that known as La Zisa, begun by William I and finished by William II, also still contains some fragmentary mosaics. In the Sala Terrena, two narrow strips of conventionalised pattern, one in mosaic and one in *opus saracenum*,



Figure 148 Mosaics from La Ziza Palace, Palermo, twelfth century, set inside an elaborate Cosmatesque frame. Byzantine? Western? Islamic?

run round the whole room. There is a further surviving oblong panel of mosaic framed by *opus saracenum* in a fountain niche, and there may have been further mosaics on the vaults and walls but no traces survive. The mosaic pattern is formed from bands of palmettes and leaves (Fig. 148). The panel consists of three interlocked medallions with a background of tendrils. The left and right medallions contain two peacocks either side of a palm tree; the central one has a tree with birds on the top branches and two archers below shooting at them.[91]

This provides the only dated example of Norman secular mosaic – and one of the very, very few pieces of surviving secular mosaic from the Middle Ages. The mosaics of both palaces highlight a couple of issues that a focus on the churches of the Norman kings tends to obscure. One is that mosaic may well have had a wide secular use (as indeed the twelfth-century Byzantine material hints at); another is that these mosaics suggest Islamic influences in motifs and design. How far mosaic was used in the Islamic Mediterranean world in this eleventh- and twelfth-century period is obscure. There is evidence indicating its use in eleventh-century Muslim Jerusalem and texts intimate that secular mosaics were made in twelfth-century Cairo, implying its continued, if small-scale employment.[92] I am about to go on to make a case in favour of local mosaicists in the case of the mosaics of the Church of the Nativity in Bethlehem: presumably these were Christian but their existence raises the possibility of Muslim mosaicists also. But elements of the Sicilian church mosaics also suggest the Islamic world. In the Martorana, for example, the vaults of the corner bays are covered with six-pointed gold stars on a blue background.[93] Although these are familiar Christian motifs, here the stars are made not from gold tesserae but from shaped pieces of gold glass, closer to inlays, a popular Muslim form of decoration. Other inlays, this time of circles of gold glass, are visible forming the decoration of the robes of Mary in most panels in the Sicilian mosaics, including the George of Antioch panel and the Annunciation in the Martorana, where the feathers of the angel's wings display a similar feature in white, red and blue, resembling an outlined Christmas tree with round coloured glass baubles. The tassels on

Roger's imperial robes also appear to be cut to fit. These details in the Sicilian mosaics contrast with, for example, the pearls depicted on the crown of Mary in the apse of S. Maria in Trastevere in Rome which are carefully and skilfully built up from separate tesserae, as are the jewels in her dress in S. Francesca Romana, though the cross in the halo of the Lamb of God at S. Clemente is created through two mother-of-pearl inlays, a rosette and a tear-drop (creating a visual effect of a sense of steam coming out of his ears, see Fig. 138). In Sicily, decorative inlays were also used as an architectural feature: at the Martorana, they are notable on the exterior of the building, especially on the bell tower, which is one of the first monuments in Palermo to carry such polychromatic inlay, and on the floor of the building, inlaid in stone in the fashion known as Cosmati work.[94]

The Islamic influences in Sicily visible in the mosaics, but more apparent in other areas of art and architecture (the roof of the Cappella Palatina, for example), reflect a fusion of artistic styles or perhaps better a variegated use of styles that could have been the product of Syrian or of Christian Egyptian artists working in Sicily and of local craftsmen working in their local, mixed idiom.[95] But, as with purported Byzantine elements in Norman Sicilian culture, they do not necessarily mean a conscious and deliberate attempt at cultural assimilation or synthesis. There was no equality of treatment for Muslims (massacred and deported from Norman Sicily) or indeed for Orthodox Christians under the kings.[96] Further, the mixing of styles is too inconsistent and vague to suggest any coherent programme of use. As has been asked in other contexts and on more than one previous occasion, so here: how far were the royal patrons and their advisors aware of or how much did they care about these differences, or did they simply employ what was to hand to make something that they liked the look of and was fit for purpose?

The final surviving Norman mosaic is the internal decoration of the Cathedral of the Assumption of the Virgin at Monreale, about 15 km from Palermo, which was founded by William II. Work may have begun in 1172; it certainly had by 1174; and construction finished in the 1170s, though parts of the complex were never completed. Monreale is a huge set of buildings: cathedral church; Cluniac Benedictine monastery; and cloisters. The church itself is vast, 102 metres long and 40 metres wide (in Rome, St Peter's was 123 × 66 metres and the Lateran 100 × 55 metres). It is a Latin basilica with a hint of the Byzantine cross in square church. There are no vaulted spaces, other than the three apses and presbytery, and the cupola over the crossing is a fake, created by heightening the central square and giving it a square lantern. The result is an expanse of flat surfaces everywhere, and very little articulation of the walls. Mosaics cover the entire surface of the walls of the whole church between the socle and the roof. There are something between 6,318 and 7,600 square metres of mosaic: this is the largest extant ensemble of mosaic decoration in Italy.[97] The mosaics are undated but the presence of two images depicting William II as part of the programme suggests that they were contemporary with the building.

The effect when the worshipper or visitor enters the church is tremendously impressive. The mosaics appear almost like tapestries, hung on the walls with no obvious division, and treated almost as continuous horizontal strips, though with gradations in sizes and colours, and with little sense of vertical axes. There are perhaps five main sections to the decoration (Fig. 149). The central sanctuary is one, with its Pantokrator in the conch of the central apse, and the Virgin and saints below. The side apses with scenes from the lives of Saints Peter and Paul are a second; the central square and transepts with Christological cycle a third. The aisles contain Christ's miracles



Figure 149 View into the apse of the Cathedral, Monreale, twelfth century, with clear echoes of Cefalù, but on a massive scale.

and the nave forty-two Old Testament scenes (Fig. 150) and the life of the Virgin, a prologue to the main event in the sanctuary. The porch originally held the life of the Virgin and scenes from the infancy of Christ.[98] But Marian imagery is also aligned along the central axis of the church and in a series of doors and entrances, as befitted her appellation as the Gateway of Life and Door to Salvation.[99] The biggest challenge was surely finding the stories to fill the space at Monreale: twenty-five Christological scenes feature in the church, including some very unusual ones – the Road to Emmaus, for example, in four parts. It is widely accepted that the mosaics were put up as a single campaign, almost certainly over several years.[100] There are no obvious scenes missing, no repetitions and no overlaps, which one might expect if this had been a programme put together by various patrons and artists over a long period of time. Rather, it seems a more homogeneous



Figure 150 Detail of Old Testament scenes from the Cathedral, Monreale, twelfth century. Cain and Abel above, Esau and Jacob below. Beyond them on the outer wall are scenes from the life of Christ.

work, possibly conceived by one person in its main outlines and put together by a number of artists and workmen to this plan.[101] Visually, the effect is magnificent: there is a stunning and uninterrupted view down the whole length of the church to the vast, imposing Pantokrator in the conch of the apse, which is at least a quarter of the height of the nave, framed by the arches of the crossing, the presbytery and the apse. Some see the mosaics as overblown and in the wrong sort of building, but they tend to stun the viewer through the sheer mass of colour and gold, a very different sort of effect from the carved stone one expects in a Western cathedral. If anything, surely the church was reminiscent of the great Roman basilicas and their walls packed with images, St Peter's above all.

William II was keen on his foundation, making a series of donations to it throughout the 1170s and 1180s. The church contained a royal throne, implying a regal presence, actual or symbolic, during the celebration of the liturgy. This throne was located close to the presbytery in the crossing, on the liturgical right. Immediately above it is a mosaic panel showing William as ruler, crowned by the Virgin, and facing it was an image of William the patron, offering, on bended knee, his church to Mary.[102] William II also conceived of it as the royal mausoleum of his family, taking the place of both Cefalù and Palermo cathedral, and moved the bodies of his brothers, father and grandfather into it. This increased its standing, at least while the Normans still ruled in Sicily, though. Monreale was very much a monument of his personal piety and it lost some potency after his death.

In terms of ecclesiastical policy, the cathedral may have stood as a challenge to the primacy of the archbishop of Palermo; certainly the archbishop began rebuilding his own cathedral at

much the same time in the 1170s and 80s and placed mosaics in it, including an image of himself, and certainly, even after William's death, popes gave its archbishop their support ahead of the archbishop of Palermo.[103] The saints at Monreale are a mixture relevant to the setting: apostles; saints listed in the Gregorian canons of the Mass; early popes (Clement, Sylvester); the patron saints of the French and Sicilian monarchies, Martin and Nicholas; the very recently canonised (1173) Thomas Becket of England, killed on the orders of King Henry II in 1170. References are made to Western monasticism through Peter and Paul: Monreale was a Cluniac monastery subject to the pope, and the church had been built with papal support at a time when Sicilian troops were actively involved in his protection, a very different scenario from that of the pope and Roger II. There are hints of the church as the New Jerusalem. It has also been suggested that liturgical dramas, which were important in southern Italy and Sicily in this period, may have affected some elements of the programme.[104] All in all, this is another Western church in which the celebration of the Western rite was of paramount importance and in which the decoration's primary role was to support that. Because the Cappella Palatina, Cefalù and Monreale were all royal foundations, they almost certainly carried the ideological messages about rulership that the Norman rulers wished to convey, albeit in three different settings: a palace church; a new bishopric developed as a challenge to the papacy; and a favoured archbishopric. Many of these ideas about rulership looked to the West rather than the East, to twelfth-century France in particular, the area from where the Normans came.[105] Both Cefalù and Monreale display the king as God's minister; both demonstrate close links with Jerusalem and the Holy Land, and a reflection of the Church of the Holy Sepulchre. Monreale, indeed, might be constructed as a visionary Jerusalem, a heavenly city, and an appropriate resting place for the royal dead interred there. At the Cappella Palatina, coronation themes may be more obvious, coupled with a sense of the space as an audience hall.

However, mosaic in Sicily was not the exclusive preserve of the monarchy, as George of Antioch's Martorana and Archbishop Walter's cathedral in Palermo indicate. Overall, the sheer quantity of surviving mosaic in the kingdom from this very short period of time is intriguing. It contrasts with what seems to have been happening in Rome in the same period, where the use of mosaic seems to be more limited, perhaps just to the apse, as at S. Clemente and S. Francesca Romana. Whilst it is conceivable that this is simply a chance survival, and that Roman churches were fully mosaicked, it may well be the case that they were not. This may have been a resource issue, that money, materials and manpower simply did not exist to allow the scale of work seen in Sicily; as I have said, this was a troubled time for the papacy and finances may have been tight. It may have been choice. But we should not forget that the great apostolic basilicas of Rome, churches like S. Maria Maggiore, the Lateran and St Peter's itself, were already full of mosaics and of images and decorative programmes, end to end, and that the Sicilian churches, backed by Norman wealth, aimed to emulate these, not current papal projects.

So the Sicilian mosaics were very much a product of their time and circumstances. Nonetheless, this has not prevented scholars from concentrating on them as 'Byzantine art', identifying what elements of their artists, style and iconography are definable as 'Byzantine' and using them to explain the appearance of art in the empire itself. The validity of this approach-needs some discussion.

METHODOLOGICAL PROBLEMS IN TWELFTH-CENTURY MOSAICS: BYZANTINE ARTISTS IN ITALY?

Many vague comments have been made about 'Byzantine influences' in Italy, especially in the field of mosaic art: 'Sicilian and Venetian mosaics served as principal sources for a renewed wave of Byzantine influence on Romanesque painting in the last third of the twelfth century'; '[i]n Byzantine art, a dynamic and expressive style – "late Komnenian Baroque" – had developed from as early as the 1160s, with one of its main monuments being the mosaic decoration of the central dome of S. Marco, Venice'.[106] It is unfortunate in this context that the evidence for the Byzantinism of the influences comes from the very monuments themselves supposedly inspired by it, rather than from Byzantine art itself.

Identifying those aspects of the S. Marco mosaics that 'look Byzantine' has been a considerable scholarly endeavour. Demus' interpretation of the mosaics was driven by labelling specific images as 'Byzantine' or 'Romanesque' or whatever art historical tag he felt appropriate, and his definition of these terms was through parallels. The eleventh-century mosaics of the porch, for example, were defined as close in appearance to those of Hosios Loukas, and so as Byzantine, in terms of their drapery schemes (zigzagging lower hems, for example) and modelling of figures and faces (rounded large eyes, fleshy faces, linear hair and beard), though they were seen as less hard and heavy than those at Hosios Loukas.[107] Some have compared the mosaics of S. Marco to those from Hosios Loukas and Kiev but asserted that they are not comparable with the mosaics of Nea Moni; others argue that the S. Marco mosaics look like those from Nea Moni and Nikaea; some have seen similarities with the mosaics of the Dome of the Rock, others with the wall paintings of Kurbinovo (now in the Republic of Macedonia).[108] In fact, if a work of art is twelfth or thirteenth century, monumental and 'Byzantine', it has almost certainly been compared to the mosaics of S. Marco at some point.

Demus pushed matters a stage further. Because he felt that many of the best mosaics in twelfth- and thirteenth-century S. Marco were produced or inspired by 'Byzantine' artists, he dated them in accord with the historical relations between Venice and Byzantium: Byzantine artists came to work in Venice at moments when the two powers were on reasonably friendly terms, as well as at moments of crisis.[109] In the context of the thirteenth century, in an argument with resonances of Pope Paschal II's 'Greek artists', Demus suggested that Byzantine artists fled to Venice after the Sack of Constantinople (by the Venetian-led Fourth Crusade) in 1204. These men had died out by 1240 (old age, one assumes) after training apprentices in Venice, leaving space for a *renovatio* in Venetian mosaic-making in the 1280s, after the restoration of the Byzantine Empire.[110] They would also prove, I suppose, that mosaic workshops had been re-established in Constantinople, perhaps by those self-same mosaicists who had fled to Venice but returned after 1267.

In Sicily too, emphasis has lain on the Byzantine nature of the mosaics. Demus, for example, concentrated on the similarities he perceived between the mosaics at Cefalù (which he saw as feeding in to those of the Cappella Palatina) and those of Daphni, which he dated to 1100, a decorative programme that he claimed showed 'the style of Constantinople at its purest', a set that 'occupies a place apart from the rest for its high artistic qualities' (the previous chapter discussed some of the problems inherent in these claims and the contrary view that Daphni's mosaics were 'provincial'). Among the stylistic similarities that linked the two were the similar statuesque nature apparent both in the poses of

figures, with slight turnings, and in the treatment of draperies. Both share the same sort of 'refined' colouring, the same sort of 'portrait-like quality' of the faces. Nevertheless, the bulk of Demus' analysis of the Cefalù mosaics concerns the differences between the two. Those at Cefalù are clearly inferior: they should be seen as stiffer, drier and less organic than those of Daphni; they have lost vitality and articulation. In contrast to the clear modelling of figures at Daphni, with their articulation of the hips for example, at Cefalù, the figures have 'an almost sack-like' appearance.[111] Demus' argument was that the differences between the mosaics of the two sites were those that would occur over the half-century gap separating them. That gap has widened to almost a century, since many art historians would now date Daphni to the mid-eleventh century and associate its mosaics with those from Torcello rather than with Sicily (though some similar premises for this relationship have been proposed). It is a shift that underlines the difficulties inherent in employing 'style' to establish 'Byzantinism'; nor is it clear what such a relationship is supposed to establish. With Sicily, Demus was also concerned to show the ways in which the various Sicilian mosaic 'programmes' adhered to or adapted his own schema for Byzantine church decoration (making them more or less Byzantine in the process).

Kitzinger's 'Byzantine' in Norman Sicily seems more focused on iconography and choices of scenes than style.[112] Having his cake and eating it at the Cappella Palatina, for example, he proposed that we see the mosaics as 'purely and characteristically Byzantine', but only in their appearance; their programme was manipulated for particular ends and deviated from the 'spirit' of Byzantine church decoration, by which he meant Demus' schema of the Middle Byzantine church decoration.[113] He argued, amongst other things, that putting an Old Testament cycle in the western part of a church and a New Testament cycle in the eastern was 'un-Byzantine'. In contrast, the use of a Pantokrator in the dome was Byzantine, because such examples exist in Daphni and at Hagia Sophia in Kiev. This route of finding similar iconographies in art either from the Byzantine Empire or from areas associated in some way with Byzantium, be that Serbia, Kiev or southern Italy, in any art form, underpinned a great deal of Kitzinger's analysis, both of the Cappella and of the Martorana. Discussion of possible Western iconographic comparators occupied a minor space. Where Kitzinger defined style as 'Byzantine', it was often in terms of the use of contrapposto, elongated figures, enhanced linearism especially in draperies, increasing agitation in poses and garments. He too shared Demus' belief in stylistic parallels with the mosaics at Daphni.[114]

And some extremely complicated arguments for the sequence of mosaic-making in Norman Sicily have been made on the basis of apparent changes in both style and iconography. This is most apparent in the different views of Demus and Kitzinger over the order in which the mosaics of the cathedral at Cefalù, the Cappella Palatina and the Martorana were installed, depending on who copied what from whom. Similar arguments underpin debates about the time taken to complete the mosaics of the Cappella Palatina – that more on the basis of changing style within the mosaics than anything else, Roger's decorative programme of this very small chapel, begun in the 1130s, was not completed until the 1170s. Not only that; Roger's craftsmen were Greek but the later artists at the Cappella were Sicilian, because their mosaics were not as good. Workshops and hands bedevil discussions of the mosaics. Kitzinger saw the Cappella Palatina and the Martorana as the work of two different, but closely related, Byzantine ateliers, and Cefalù as a separate workshop.[115] In contrast, Demus preferred to relate the artists of the Cappella Palatina to those of Cefalù (were three separate groups of

Byzantine artists in Sicily in a twenty-year period too many?).[116] At Monreale, however, he rather liked the idea that the Byzantine mosaicists who worked there had been kidnapped from Thessaloniki in the 1180s during one of William II's forays there.[117] The rationale for all of this appears to be that Roger II was a Norman; Normans were rough warriors. Where did Roger get his artists from? Byzantium, of course, because there were no 'powerful schools of mosaic in Italy'.[118]

What is very apparent in these arguments is the superiority of 'pure' Byzantine mosaics (i.e. Daphni) in both style and iconography to those of Venice and Sicily. But at least those mosaics have Byzantine antecedents, unlike the despised mosaics of twelfth-century Rome. Here, as noted above, Byzantine influences come via the supposed primacy of Monte Cassino. Kitzinger, for example, claimed that S. Clemente did not make sense without Desiderius: 'Unless the S. Clemente mosaics are brought into relationship with the Desiderian revival they hang completely in the air.'[119] I made the case earlier that the idea that Abbot Desiderius' imported Byzantine mosaicists revived the art in Italy is less than the whole story, since mosaic-making was not an unknown art in Italy, and that if Byzantine mosaicists were employed at Monte Cassino it was through choice not necessity. However Kitzinger also argued that the mosaics of Salerno were of a higher quality than those of S. Clemente and that therefore the S. Clemente artist learnt from the artist of Salerno, or was perhaps trained by the Byzantine artists there or at Monte Cassino. In Demus' view, by the time that the Byzantine influence of Monte Cassino reached Rome, it was almost entirely Westernised, carrying 'very little' of the original 'Byzantine impulse' and ready to embrace Early Christian elements (clearly all Bad Things).[120] These are both difficult arguments to sustain: only very meagre fragments survive from Salerno, and the richness of the mixing of styles and iconographies at S. Clemente, coupled with the level of technical skill in making the mosaic, suggests that it is of considerable quality in its own right. Indeed, at S. Clemente, many of the elements in the mosaic are clearly Roman and from the Roman tradition (from the clouds and sheep to the canopy and Hand of God), and the appearance of the mosaic owes as much to medieval Western art (be it called Roman, Romanesque or Gothic) as to Early Christian or even Byzantine.

This 'Byzantine' framework for understanding the mosaics of Venice, Sicily and Rome has led to an implicit acceptance of the existence of three, four or even five schools of Byzantine mosaicists in twelfth-century Italy: one apiece in Torcello and Venice and in Monte Cassino, left over from the previous century; and at least two, if not more, in Sicily. It is an approach that overlooks the possibility for mosaic-making existing in its own right in Italy, except when locals are taught by Byzantines and then set up their own (inferior) workshops, that ignores questions about the accessibility of materials for mosaics, and that prefers to emphasise the relationships between Byzantium and the particular Italian state ahead of any local concerns. The biases come because it is a line of argument concerned to use the Italian material to reconstruct Constantinopolitan mosaics that rests on the implicit assumption that mosaic equals Byzantine medium. Demus, for example, held that the Byzantine metropolis (Constantinople) had a 'kind of monopoly' in mosaic art, but that Latin peoples coming under Byzantine influence wanted mosaic for themselves and so were compelled to import it, distorting it in the process.[121] Similarly, it has been suggested that the technique of mosaic was so coveted by the Latin and Slav people of the Byzantine sphere of influence that they strove to master it themselves as soon as possible in order to become independent of Constantinople.

However easy it was to acquire technique, these people found it 'next to impossible to master the subtleties of execution, let alone the inimitable refinements of style'.[122] Instead, they produced provincial art, mosaic degenerated, and fresh supplies of Byzantine mosaicists had to be called for. Completing the circularity, in S. Marco, for example, the more 'Byzantine' a mosaic appeared, the earlier it was, being closer to the original Byzantine mosaicists; the more 'Venetian' and 'provincial', than the later the mosaic. The south dome, for example, was produced by 'mediocre craftsmen who belonged to the fringe of the "local workshop"', whilst the Ascension of the central dome could have been inspired by the latest in Constantinopolitan mosaics.[123] At Cefalù, the patriarchs and prophets in the upper registers have been seen as the work of Sicilian not Byzantine artists, because they are felt to be less skilfully executed.[124] There is 'a peculiar lifelessness' to the twelfth-century mosaics of Rome, because they were not the work of Byzantine mosaicists. Rather, Rome was 'chained' to its Early Christian past and unable to 'draw life from the great living mosaic art of Byzantium'.[125] And the Venetians (not Byzantines) sent to help out the Romans in the early thirteenth century at S. Paolo *fuori le mura* did not distinguish themselves in their making.[126] Demus suggested that lesser Byzantine workmen were 'sent' to Venice, though these artists were a step above the 'third-rate mosaicists' sent to Kiev to create the uncouth and provincial mosaics of Hagia Sophia.[127] Similarly he saw the mosaics of Gelati as provincial and rude, though Georgian scholars prefer to see them as major works by a great Georgian artist, two sides of the same coin.[128]

How much weight should these arguments carry? It needs to be said very clearly once more, as was said in the Introduction, that there is absolutely no evidence beyond the detection of presumed artistic styles to support the existence of Byzantine artists in Venice, Rome or Sicily in this period (or indeed any other). This argument ignores all the material there is for an on-going tradition of mosaic-making in Italy. The Norman kings of England may well have had to import mosaicists, but the Norman kings of Sicily could, potentially, have found mosaicists on their own island or elsewhere in the region. Further, there is no irresistible evidence to establish that Byzantine mosaicists were the best. Rather, this view has led to a series of complex arguments built on a self-reflexive position like that of Demus' outlined above: twelfth-century Byzantine mosaicists were the best; therefore the best mosaic work was carried out by Byzantines; therefore when we identify the best mosaic work, we know it was the achievement of Byzantine artists.[129]

Our perception of 'Byzantine influence' in the twelfth century is also affected by the fact that the question of where the tesserae and glass for these mosaics came from has never really been asked. In the case of S. Marco, Demus assumed that the tesserae came from Byzantium (source of all mosaics), though any evidence for this is later than the mosaics and contentious, and it is also possible that increasingly the glass and/or the tesserae were produced in Venice (the Venetians were working glass in the tenth century and raw glass seems to have been an established industry in the city by 1233, as discussed in Chapter 1).[130] In the cases of the mosaics of Rome and Sicily, the question of materials has not been raised. But the answer might help us understand more about how the mosaics were made. In Rome, what evidence there is suggests that the glass used in these later mosaics is very similar to that of the early mosaics, and this may indicate a reuse of tesserae. In Sicily, raw glass may well have come from the Levant and there is evidence to show that some tesserae from Monreale were opacified with quartz, a particularly Byzantine technique, rather than with tin, as with

twelfth-century tesserae from Rome and S. Marco in Venice.[131]

And one thing signally absent is any definition of what makes a good mosaic, what the 'subtleties of execution' might be. The 'master's' work might be defined as 'less coarse', more 'refined' in design, colour and technique; other mosaicists are less skilled in their modelling, flatter, perhaps not working from the model book as effectively.[132] Those scholars who have produced these detailed style readings and qualitative judgements have often studied the mosaics in detail in close-up and by and large from photographs, as if they were paintings in frames in art galleries. But (see Part I of this book) mosaics were designed to cover walls and really should be understood qualitatively in those terms. Debates about quality have as much to do with whether a mosaic is in a prominent position and highly visible (artist must make an effort) or a dark corner and less visible (artist can afford to scamp on design and materials); or an important person (Christ, patron – artist needs to get it right) or not (minor female saint – anything will do). And while it is more than likely that less good artists, or perhaps apprentices, worked on the lesser figures, this tells us little about their ethnicity, nation or faith. Indeed, why would the Venetians, who, by the twelfth century, had plenty of experience of mosaic-making and could have established their own mosaic school, have needed second-rate Byzantine artists? If, on the other hand, the mosaicists in Rome, who could be very good indeed, as the apse mosaic of S. Clemente bears witness, were Byzantine or Roman, what does this tell us?

The ideas of 'Byzantium' coupled to a lack of local artistic skills are too easily invoked to explain perceived changes. I made the case in the Introduction that if an artist could produce art that 'looks Byzantine' to us, that is evidence that suggests he was a skilled and capable artist, not that he was from the Byzantine Empire, though he may well have been. Consequently, if elements of these twelfth-century mosaics look like the sorts of things apparent in Byzantine art, this is only the start. Style can be informative, but we need to be far more careful in considering what it may be informative of. How do we know that 'Byzantine style' was perceived and valued in the twelfth century, and by whom? It is clear that art from the Byzantine Empire was influential across the Mediterranean, seen through imports of silks, for example, or of bronze doors. But there is the question of what a patron was doing in importing such objects, that significant difference between deliberately wanting to be Byzantine or wanting to incorporate elements of Byzantine style.[133] Italian artists certainly had access to what might be defined as 'Byzantine art', but that must have included older works already in the region, and the art in areas such as the Balkans and the Levant, and there is no evidence to tell us what it was that might have made things 'Byzantine' for their audiences (and not just 'Byzantine' – I have used terms like 'Romanesque' and 'Gothic' in looking at the mosaics of S. Clemente and suggested that these too were choices). Did patrons and audiences have the tools, the knowledge, the interest to discriminate between styles or to understand the implications of the choices they made? What, for example, did the Venetian Council or the pope or King Roger himself see and recognise as 'Byzantine'? What did they know of Constantinople compared to what they knew of Rome? How do we know these borrowings were meaningful in the ways we think? We also need to ask what the elements of the mosaics that look 'Byzantine' might have said to their twelfth-century patrons and audiences and whether it was the same in Venice, Rome and Sicily. Were any of these mosaics identified as 'Byzantine' rather than 'Christian' or even 'Roman' in the twelfth century?

It is almost certainly true that Byzantine artists were present and working in Italy and that Byzantine art was an influence in Italian art (though the reverse may also have been applicable). It is absolutely fair to say that there are things about the mosaics in Venice, Rome and Sicily that look like elements in Byzantine art (that is, art produced within the Byzantine Empire), and that viewers at the time might have seen them as 'Byzantine' (that is as evoking the Byzantine Empire), and it is also appropriate to note that the many inscriptions on the mosaics in Venice and Sicily are in Greek, which makes them even more 'Byzantine' in appearance. But it is also reasonable to say that there are aspects of these mosaics that look like elements of Romanesque and Gothic art as well as (in Sicily especially) Islamic art, that inscriptions are in Latin as well as Greek, and that all appear in buildings used by Latin Christians. It is not hard to envisage a situation in which Christian mosaicists from East and West worked on the same mosaic programmes. In the case of Venice, it is credible that there was a local tradition of mosaic artists who had been working on Torcello and S. Marco since the eleventh century. In Rome, it is reasonable that mosaic-making never completely died out. In Sicily, the Norman kings superimposed themselves on a Muslim state in an area with strong Byzantine connections: again, they may have turned to Byzantium for artists but there may also have been local traditions and local artists experienced in the medium. In late medieval southern Italy, one response of the Orthodox to increasing papal pressure was to increase manuscript production in Greek: but that did not make either the scribes or the patrons Greek or Byzantine. And what should we make of the Normans founding numerous monasteries, both Orthodox and Roman? In each case, style and iconography were surely the result of choices, for patrons if not viewers; each case needs to be considered on its merits, in terms of its historical and cultural context, not as part of a picture in which non-Byzantine artists were unable to master subtleties of execution.

Issues around identity are complicated. People occupy more than one position in society at the same time and choose to identify themselves in different ways, ethnically, culturally, in religious terms, whatever, under different circumstances. But the overwhelming emphasis on identifying hands, of dating styles and of using style to date has brought discussion of these mosaics almost to a standstill, simply because the terms of the debate are so exclusively those of style and iconography. It is not an issue unique to the study of mosaics: it affects much of the study of medieval Italian art, especially southern Italian art. The study of medieval ivories, for example, is dominated by the same desire for categorisation and attribution, to individuals, to workshops, to schools, based on style, iconography and technique.[134] Like mosaics, these ivories (often seen as twelfth-century productions) are divided by geography and tied to particular locations through quality: good ones must have been made in Constantinople and poor ones in the provinces. But for mosaics as well as for ivories, such taxonomy and classification is concerned with exclusions, limits and boundaries rather than overviews; yet the overview – 'why were mosaics put up at all?' – is surely more interesting than who's in and who's out on the 'Byzantine' radar? The more interesting question may be not 'which artist put the mosaics up?' but 'why were mosaics put up at all?'

What I endeavoured to do in the earlier section of this chapter is to provide something of the missing regional context for the use of mosaic in twelfth-century Italy. I suggested that in the three areas from where most material survives, Venice, Rome and Sicily, a variety of factors can be seen at play, some relating to local concerns (standing in the immediate area), some to regional rivalries (contesting

the place of Rome and the primacy of the pope), some to international issues (including in relation to Byzantium, but not forgetting the Islamic world, adding something different, a political gesture, a cultural comment?). I also suggested that mosaic itself as a medium relating to the Roman Empire and to Early Christianity and the Apostolic Age still carried some clout. Rome's Early Christian past was less of a dead hand and more a source of inspiration. The mosaics of Venice, Rome and Sicily present a complex question about the use of mosaic in Italy in this period. The mosaics do not look the same; they are used for both similar and dissimilar reasons and as a response to each other, as well as to Constantinople and, perhaps, Cairo or Damascus. The ambiance for each is slightly different. In Venice, mosaics were part of the self-fashioning of the city, creating its Early Christian past and heritage (witness the rise in the cult of St Mark) and a strand in its rivalry with Rome and Constantinople: the doges and the Council had a political agenda in the twelfth century of asserting Venice as sea-power supreme, mistress of the Mediterranean and subservient to no one. In Rome, popes fought to maintain their political standing and religious primacy and used mosaics for their association with the apostolic past. In Sicily, the Norman kings also wished to proclaim their power as kings and their authority as equal to emperors, be they Byzantine or Holy Roman. Mosaic in this context evoked both Byzantium and the Arabs; it also engaged with Italy's, and specifically Rome's, Christian past and Christian authority. The island itself had a Byzantine past and maintained a close association with southern Italy, which was still under Byzantine rule for much of the twelfth century; here, 'Byzantine' influences might reflect local artistic traditions.[135] And beyond all of this, and more simply, mosaic was costly, showy and complicated. A patron choosing mosaic was asserting far more than a possible 'Byzantineness': this may have been the least concern. In the end, mosaic was used above all in churches, for the greater glory of God, and the greater glory of the patron.

THE LEVANT

Similar issues to those in Italy about Byzantine influences and hybrid workshops have been raised about the final programme of mosaics to be discussed in this chapter, a set at the other end of the Mediterranean world, in the Christian Levant, the Crusader Kingdom of Jerusalem. These mosaics, like those in Italy, also emphasise the importance of considering art in its own individual, temporal, geographical and cultural context.

The Crusader Kingdom of Jerusalem was established in the Holy Land after the First Crusade had recaptured Jerusalem and the Christian holy places in 1099. At first a collection of cities and towns, by the mid-twelfth century, the Kingdom took in what are now Israel, Palestine and southern Lebanon, as well as there being three further Crusader states located further north, in what is now Syria and southern Turkey, around Tripoli, Antioch and Edessa. This kingdom lasted until 1187, when it was overrun by Saladin; the re-established Latin Kingdom, better known as the Kingdom of Acre, on a far smaller scale and centred round the coastal city of Acre, lasted from 1192 until 1291.

The kingdom was ruled by an elite Western Catholic nobility superimposed on native Greek-speaking and Syriac-speaking Christians and Muslims plus, of course, Jews and Samaritans, and with a consistent Byzantine presence from the empire. The interrelationships and minglings of these peoples were never straightforward or easy, but the Franks became increasingly acclimatised to their new kingdom, and as generations

born there grew up they saw themselves as natives. As the Crusader historian Fulcher of Chartres commented, famously, round about 1124, 'We who were Occidentals now have been made Orientals. He who was a Roman or Frank has in this land been made into a Galilean or a Palestinian. He who was of Rheims or Chartres has now become a citizen of Tyre or Antioch. We have already forgotten the places of our birth; already these are unknown to many of us or not mentioned anymore.'[136] But the 'natives', Christian and Muslim of many denominations, and Jews, had major differences between themselves as well as with the Latins, the Fatimids, the Ayyubids and the Byzantines. How far there was a level of cultural integration, how far the elite held themselves apart, how far there was a practical co-existence are constantly shifting parameters; scholarship, in discussing the kingdom, runs the whole gamut from seeing it as a colonial society to a land in which the Latins had 'gone native'.[137] Many of these debates are played out around the art created in the kingdom, which tends to be labelled 'Crusader Art', and within discussions of this art the mosaics of the Church of the Nativity in Bethlehem encapsulate many of the issues.[138]

The original Constantinian church in Bethlehem had been rebuilt by the Byzantine emperor, Justinian I, in the sixth century; it was his basilical church that was used by the kings of the Latin Kingdom as their coronation church. The kings took responsibility for its maintenance, with both Baldwin I in *c.* 1109 and Amalric (king between 1163 and 1173) carrying out work there. The church appears to have contained extensive mosaics from its foundation, both inside and out, though what survive now are mainly in the nave and transept. Along each side of the nave was a long series of busts depicting the ancestors of Christ. Above these, underneath the windows, was a broader zone showing churches on the north side and architectural tables on the south. These aniconic images frame inscriptions relating to General (south) and Local (north) Councils of the Church.[139] Each church or pair of tables is divided from the next by ornament: on the north wall, what survives takes the form of a jewelled cross among trees or lavish acanthus-like foliage. Above these and above and below the windows is a narrow acanthus-scroll border beneath windows, while the spaces between windows are filled with figures of angels proceeding to the east end of the building (Fig. 151). Now, on the north side, seven angels, two complete churches and the fragments of a third and part of a central cross survive, whilst on the south, two tables and parts of two more, plus seven ancestors, remain. In the transepts, there was a considerable Christological cycle of which four scenes survive in various states of completion: the Entry into Jerusalem and the Doubting of Thomas are almost complete; the Transfiguration and Ascension are fragmentary (Fig. 152).[140] A Tree of Jesse – the earthly family of Christ – was on the west wall, and further mosaics are recorded in the crypt and grotto. It is clear that access to materials was not a problem: the principal colours are shades of green, red and blue, but silver and gold glass were used, the last for backgrounds, and stone and mother-of-pearl insets, used in Islamic mosaics, and in Rome and Sicily, are also employed.

The inscriptions on the mosaics are in both Greek and Latin, and in the choir fragments of what was a bilingual commemorative inscription survive. The Greek version reads: 'This work was finished by the hand of Ephraim, historiographer and artist in mosaic, in the reign of Manuel Komnenos the Great, born in the purple, and in the time of the great king of Jerusalem, our lord Amalric, and the most holy bishop of sacred Bethlehem the lord Ralph in the year 6677 second indiction.' Manuel's dates are 1145–80; Amaury's (or Amalric) 1163–73; and Raoul's (or Ralph) 1159/60–73. The Greek date of the second indiction of the year 6677 works out at 1169.[141] The Latin inscription in hexameters is now lost but enough had been recorded to



Figure 151 Looking to the west along the north wall of the nave, Church of the Nativity, Bethlehem. The Council of Antioch is flanked by lavish plant ornament inset with mother-of-pearl. The change in material from green to gold tesserae as the background of the inscription is clear, and from this angle the use of colours to create shading and dimensionality is just about becoming apparent: both would be more effective from the floor of the church. 'Basil's angel' is visible above.

show it gave similar information to the Greek, though, unlike the Greek, it put Amaury first. So the date 1169 can be attached to the mosaics, and the project itself may have begun in 1167, the date of Amaury's marriage to Maria, Manuel's niece. Despite this, there has been much debate about whether all the mosaics belong to the same period or whether those images of the Councils should be understood as seventh century whilst the scenes in the transept are twelfth.[142] This is largely based on perceived stylistic differences between the mosaics of the nave and transepts and perceived stylistic similarities between the aniconic mosaics in the nave and the imagery of the Dome of the Rock in Damascus. However, the close examination made of the mosaics in 2015 indicates very clearly that the mosaics should be seen as all of a piece and as twelfth century.[143]

The cleaning in the early twenty-first century revealed the richness of the materials, the bold colours and the sophisticated modelling seen, for example, in the use of shading on the architectural Councils of the north wall to create a sense of recession and perspective, or in the way in which the fragmentary curtain at the junction of the north wall and the transept is shown as hanging in folds, or the incredibly elaborate and



Figure 152 The Entry into Jerusalem, south transept, Church of the Nativity, Bethlehem, twelfth century. Mother-of-pearl is used in various places – in Christ's halo for example, and as inlaid disks in the decorative bands along the bottom of the panel. Much of the 'grey' highlighting on garments is created through silver tesserae.

intricate patterning that runs below the Doubting of Thomas in the transept. In the image of the Council of Serdica, mother-of-pearl is used to create the translucency of glass on the vessels on the altar; a stone background to the inscription below the domed arch in the scene modulates into gold, meaning that the viewer below would have seen only gold. The mosaics have been seen as a mixture of styles, borrowing elements from Byzantine, Western (notably Venetian) and Islamic art. Comparisons are frequently made with the Dome of the Rock and with the mosaics of the al-Aqsa Mosque. But similarities have also been drawn with the mosaics of Hosios Loukas and Daphni and with Sasanian (Persian) and Armenian Christian art. Without seeking to disentangle every reference perceptible in the mosaics, it can fairly be said that they represent elements of the sorts of artistic styles one would expect to find in a state such as the Latin Kingdom, an eclectic mixture drawn from the different peoples of the region.

The names of two, possibly three, artists associated with the mosaics support this eclecticism.[144] The first, Ephraim, named in the inscription from the choir in Greek, but presumably also Latin, and described as historiographer (ἡστοριογράφος) and mosaicist (μουσιάτρος), was in charge. The second is Basil, recorded in a Latin inscription at the feet of one of the angels of the north nave arcade as 'Basilius Pictor', 'Basil the artist', and again in Syriac, 'Basil the deacon depicted [this]' (see Fig. 53), whilst on the south arcade, opposite this, the initials *BC* flank a cross medallion in the image of the first Council of Constantinople, and these may possibly be the first and last letters in Greek of the name *Basilios*.[145] The third is more doubtful: a further, partial Greek text recorded in the seventeenth century at the wall return separating the south transept apse from the presbytery read: 'Remember, Lord, your servant Zan . . .' The inscription may date to the twelfth century; 'Zan', if correctly transcribed, may reflect 'John' in Venetian dialect; it may refer to an artist of the mosaics. It has even been posited that the mosaics can be divided between the three, with Ephraim responsible for the choir, Basil the nave and Zan the transept.[146]

But what or who Zan, Basil and Ephraim were, in terms of their origins, is more complex. Ephraim has been identified as a Constantinopolitan master, or perhaps one from Sicily or Venice (so either an Orthodox Christian or a Catholic Christian), who was brought in specially to work on the mosaics.[147] Basil then becomes his local provincial assistant, perhaps a Syrian Christian.[148] Zan the Venetian (Catholic Christian) was maybe another assistant. Yet another scenario has Ephraim as an indigenous Christian artist from a local mosaic school – like those hypothesised much earlier for work on the Dome of the Rock – for there is no reason to suppose that local artistic traditions and indeed Levantine use of mosaic had died out (see the earlier arguments about the al-Aqsa Mosque).[149] A case has been made for an ivory workshop in Crusader Antioch, for Muslim artists in Syria working on ivories alongside Syrian Christians in the city; if earlier arguments for Levantine workshops have any force, then a similar case can be made for mosaic workshops, buttressed by Benjamin of Tudela's evidence that glass was certainly made in Antioch and Tyre in the twelfth century.[150] But Zan, Basil and Ephraim, whether Byzantine Greeks, Byzantine-trained Crusader mosaicists, Western-trained, Westerners coming early in life to the Levant, Crusader artists trained by other Crusader artists, Venetian artists or Crusader artists, Syrian Christians, even Muslim mosaicists, monks or laymen, beg the question of what we hope to gain by knowing the origin and background of the artist. In the end, we will never be sure of the ethnic and religious origins of these men, nor indeed of where they trained as mosaicists, but what we take from their mosaics are separate elements that we identify as Sicilian, Venetian, Byzantine, French, Syrian, Islamic, Sasanian or whatever, but which are actually a blending of styles, iconographies and ideas to create mosaic images that are perhaps better labelled 'Crusader' in reference to their cultural context.[151]

Rather than searching for the origins of the artists (and we have no reason to suppose that any patron in twelfth-century Jerusalem or Constantinople knew or cared or set down conditions of employment about this issue), it is more profitable to consider what the mosaics themselves might tell us about the Crusader Kingdom Outremer. The local sponsors of the mosaics were themselves a mixture, aristocratic Frankish 'Orientals', to take Fulcher of Chartres' term, men who had been born and brought up in the Kingdom, military men and clerics alike, coupled with the Byzantine emperor. What then were the mosaics of the Church of the Nativity for, and why did Amaury and Ralph, the men on the ground who used the building, with support from Manuel Komnenos, who never went there, decorate their church in mosaic?

To deal with the 'what' first. Appropriately enough for a church dedicated to Christ's Nativity, and the second-greatest pilgrimage site in the Christian Holy Land after Jerusalem, the programme seems to have had a focus on interpreting the birth of Christ and indeed in locating it as a historical fact.[152] The scenes that we know for certain were in the church are not so much a 'Feast Cycle' as a cycle about Christ: interestingly, there is no record of a Crucifixion, suggesting that we have lost much detail about the mosaics. Thus the Virgin and Child in the apse and the Tree of Jesse (west wall) and the images of the ancestors of Christ (south and north walls, above the architraves), the Nativity (in the grotto), the Magi (inside and out) and the Passion cycle all combined to comment on the Christian message of salvation and redemption. However, they also reminded viewers of the debates about the divine and human elements of Christ; the Church Councils depicted in mosaic provide the official sanction for his portrayal, perhaps articulating a commonality between East and West (at a time when the Great Schism of 1054 broke the communion

between the papacy and the patriarchate) and a shared faith standing united against heresy. This last was a particularly relevant issue in twelfth-century Bethlehem and in the Latin Kingdom, where Islam was perceived as a heresy rather than an alternative faith. In this way, the mosaic programme was an ecumenical statement, potentially one designed by the clergy on the ground. The church itself brought Latin, Byzantine and, presumably, local indigenous Christians together.

Large though it was, this was not the first set of mosaics in the church. The fourth-century pilgrim Egeria had mentioned mosaics which she ascribed to Constantine; Eutychios, the tenth-century patriarch of Alexandria, told a story of mosaics inside the church being preserved by order of Caliph Umar.[153] An early twelfth-century author, a Russian abbot called Daniel, mentioned the church's mosaics, as did the German monk Theoderich (1172) and John of Würzburg (1160–70), who both praised the mosaics of the crypt, the site of the cave and the manger, and indeed a few tesserae remained in situ in the Grotto of the Virgin.[154] The church was not only decorated in mosaic. It also had paintings, notably in the form of images of saints painted on the columns of the church and dated perhaps to 1130–69. These vary greatly, exhibiting a considerable mix of interests: some are local (Theodosius and Sabas were local hermits), some Western (Leonard – England and Aquitaine; Olaf – Scandinavia; Vincent – Spain) some general (Anne, the mother of Mary; John the Baptist). They are labelled in Greek and Latin. They may well represent *ex votos*, created in fulfilment of a vow or in the hope of saintly support, as at St Demetrios in Thessaloniki or in the St Sebastian panel from Rome. In Rome too mosaic and paint could be used together in the same building and often at the same time (in St Peter's for one).

But the amount of patronage is not surprising. The church was (and is) one of the holiest of all Christian sites, matched only by the Holy Sepulchre in Jerusalem. The work was a sizeable programme, which would have involved a considerable investment: it matched or even surpassed the decoration of the Church of the Holy Sepulchre in Jerusalem.[155] Sponsoring a costly and labour-intensive programme was a sign of great piety and devotion, worthy of God's favour. It also had a political dimension. The mosaics, and indeed the rebuilding of the church, are related to three key figures: the Byzantine emperor; the Latin king; and the local Latin bishop of Bethlehem. Manuel's likeness may have been set up in the church; perhaps so too Amaury's.[156] The refurbishment of the church was a very public declaration before God of the alliance of the kingdom and the empire. Byzantium had always claimed a level of power and suzerainty over the Crusader states; the emperor was a power-player in the region. Manuel was already married to Maria of Antioch (1161), a relative of Amaury's; in 1167, the alliance was strengthened when Amaury married Manuel's niece, another Maria. The two men allied to attack Egypt, which was in chaos at this point, and to resist Nur ad-Din, who had united the Muslim states in Syria and threatened both Byzantium and the Latins.[157] At the same time, Manuel was also talking to Rome about a possible doctrinal rapprochement, an area where his support of Christians in the Holy Land can only have added weight. But the church also had a role in the Latin Kingdom for it had been the coronation church of the Latin kings Baldwin I and II and so was invested with enormous political significance. Bishop Ralph was a key figure, for he was not only bishop of Bethlehem but also chancellor of the Kingdom.

Why mosaic? Amaury and Ralph knew Jerusalem better than either Rome or Constantinople. In Jerusalem, they knew mosaic had been used in the great Church of the Holy Sepulchre, perhaps from its foundation in the

fourth century, and certainly added to it and its multiple chapels as repairs and renovations throughout its life.[158] By the twelfth century, the church contained a considerable collection of mosaics, including a scene described as the Exaltation of Adam (probably the Anastasis), with the Virgin, Baptist and apostles below in the apse, and depictions of the Ascension (a fragment survives in the Calvary Chapel), Pentecost and Annunciation, as well as various Old Testament figures.[159] Other fragments of twelfth-century mosaic survive in situ: in the Chapel of the Franks at the entrance between it and the Calvary church, some bands of geometric patterns, comparable to decoration in the Dome of the Rock, survive in two niches above sculptural decoration.[160] The great Muslim mosques of Jerusalem, the Dome of the Rock and the al-Aqsa, had both gained more mosaics in the eleventh century; when the Crusaders converted the Jerusalem mosques to their own use, they added either mosaics or paintings (the sources do not specify) of Bible scenes and Latin inscriptions. Elsewhere in the Muslim world, the Great Mosque of al-Nuri in Homs (*c.* 1149–54) had a mihrab hood (the niche in the mosque wall indicating the direction of Mecca, which was and is the focal and axial point of the mosque, and consequently was often ornately decorated, marking out its significance) decorated in spiralling vines in green and yellow outlined in black with mother-of-pearl grapes all on a gold ground. Salah al-Din decorated the niche of the mihrab of the al-Aqsa with an inscription in gold glass on a green background dated to 1187–88, and such mosaicked mihrab hoods became increasingly popular in the thirteenth century.[161] There was a figure of the Virgin surrounded by angels in the apse of the Church of the Tomb of the Virgin and that also may have been mosaic.[162] Mosaics are known from other significant Christian sites: at Tabor, the church restored in 1130 had a mosaic of the Transfiguration in the apse; mosaics may have existed at Nazareth.[163] All of this together suggests that there was a perception of mosaic as a highly appropriate medium for the monuments of Christianity; furthermore, if it was good enough for the holy places of the Muslims, then perhaps the Christians should not lag behind. In addition, since glass was still being made in quantity in the Levant, this made mosaic a relatively easy medium to acquire and use. Perhaps my initial question is better rephrased as to why would Amaury and Ralph not have used the medium in their church?

The mosaics of the Church of the Nativity drew together Byzantine art, the art of Eastern Christians, and Romanesque, Gothic and Muslim art, all in a Levantine context. 'Crusader art' was a phenomenon in a unique historical, cultural, religious and geographical setting, whether defined through its artists, its patrons, its setting or its style, the art of the Frankish colonists in the Kingdom of Jerusalem. Jaroslav Folda defined it as 'a local style', one about local interests, local pasts, local beliefs: art put into its own setting.[164] The mosaics of the Church of the Nativity in their styles, their iconographies and their medium are an example of a series of choices made by patrons and artists. The medium of mosaic evoked Byzantium and Rome; it was certainly a medium for Christian art, but in the Levant it was one used also in the great Muslim mosques, so its use here was also a reclamation. The iconography is both generally Christian and specific to the site, whilst also carrying resonances of theological controversies, potentially even local ones. As for the style, what would twelfth-century observers have recognised in the style? Many market-orientated objects (glass, inlaid brass objects) combined Christian and Islamic features and could have been executed by Oriental Christian or Muslim artists on their own or together in the same atelier.[165] Categorising them, be they mosaics, manuscripts, ivories or glassware, by ethnic-cultural or geographic origins (Latin, Byzantine-Orthodox, Islamic) has created

artificial barriers that tend to obscure the dynamics of artistic creation and the economics of artistic production.[166] Artists, indigenous or incomers, were surely mobile and that led to a diffusion of technology, designs, iconographies, styles across the whole range of artistic media.

CONCLUSIONS

The question of what 'Crusader art' was, of which discussions of the mosaics in Bethlehem form a subset, is very similar to debates about influences on art in Sicily, southern Italy more widely and even Venice. What we have in both Sicily and the Christian Levant are two similar societies: Western knights superimposing themselves on local populations which were a mixture of faiths and peoples. And we see very similar things happening in both: rulers using art to their own ends, both spiritual and secular. That such art was a mixture of styles and borrowings, adopting elements of other cultures, sometimes consciously, or even self-consciously, and sometimes perhaps not, should not surprise us: style is our game, not theirs. Such intermingled local styles have been recognised at the same time in Cyprus, Syria, south Italy; Venice was a multicultural zone; Constantinople may well have been. Perhaps one of the most interesting questions for us now is that of why certain elements might have been used, and why some were not. More widely than just for mosaic, the Mediterranean region was a fluid, moving site for artists in whatever medium to travel; why we should think that clear, clean lines of artistic transmission, provenance and influence existed is hard to say.

The story of twelfth-century mosaics lies largely outside Byzantium but has been constructed as Byzantine. I have tried to disentangle this cat's cradle in order to see mosaics from within the empire and from outside it in their own terms. This is not to say that there were no Byzantine influences on mosaic-making in other places in this period, but that, as with other periods, such associations were choices rather than necessities. Twelfth-century mosaic-making is a complicated, intertwined story in a period of religious and political competition. There were surely various centres for mosaic-making in existence – in the Veneto, in Rome, in Sicily, in the Byzantine Empire, in the Levant, in the Islamic world – and the relationship between them, if any, is not clear and certainly not fixed. Where the artists and materials came from cannot be established with any certainty; how far the origins of the artist made a difference to the use of mosaic and the uses of mosaics, however, seems largely irrelevant. Reasons for the use of mosaic in these different areas varied, and with that variation came differences. In twelfth-century Rome, art was affected by ideas associated with the Gregorian Reform, the simplification of the Church. There were many different patrons of art: popes, antipopes, aristocrats, cardinals, female religious, lay men and women, even groups of people. And the sort of art produced was as various, using contemporary art, borrowing from Early Christian art in the city, appropriating elements of pagan antiquity, taking from southern Italy, from Byzantium, from Germany, from the Balkans, from the Crusader Kingdoms, to produce something distinctly Roman, that served the different functions that its patrons desired. In Sicily, mosaic art was very much associated with the Norman kings; in Venice with that city's civic image and its relationships within Italy and with the East. In the Levant, it evoked the Christian past and responded to the Islamic present. In Byzantium, if nothing else, it was an imperial medium. With such a range, what was produced in mosaic could only be incorrigibly plural in every way.

Chapter 12

MEN AND MOSAICS: THE THIRTEENTH CENTURY

At some point in the thirteenth century, a new and very large mosaic panel, over 30 square metres in area, was installed in Hagia Sophia in Constantinople (Fig. 153). Against a plain gold background, it shows Christ in the centre, his right hand extended in blessing and his left holding a great golden book. To his right stands his Mother, thoughtful and contemplative, almost sad, in her usual purple-blue robe ornamented with a gold cross; to his left is St John the Baptist, wild of hair and beard, rumpled, hand extended in a gesture of intercession.

At the end of the same century, in S. Maria Maggiore in Rome, Christ and Mary were depicted in mosaic again (Fig. 154). Filling the apse, this is another monumental depiction. Enthroned and located in a blue roundel centre-stage, Christ crowns his Mother, whose robe is now more gold than blue. Outside the roundel, below to left and right stand angels, saints old and new and a couple of small human patrons; below their feet runs a river with fish, fowl and, unexpectedly, small boating putti-like figures. The upper part of the apse is a mass of vine scrolling filled with birds, above which is the canopy of heaven occupied by a small gold cross.

Both mosaics show Christ and his Mother, but in such distinctive ways. In the Byzantine example, the iconography is that of the Deesis, an intercessory representation found in mosaics since at least the sixth century. In the Roman, though much of the imagery is shared with earlier mosaics, the central depiction, the Coronation of the Virgin, is a new one in thirteenth-century imagery, derived from France. The putti too hint at changes within Roman art, a reference to increasingly popular classicising trends, and two of the saints shown, Francis and Anthony of Padua, could hardly have been more contemporary. But the Constantinopolitan image too intimates modification: the

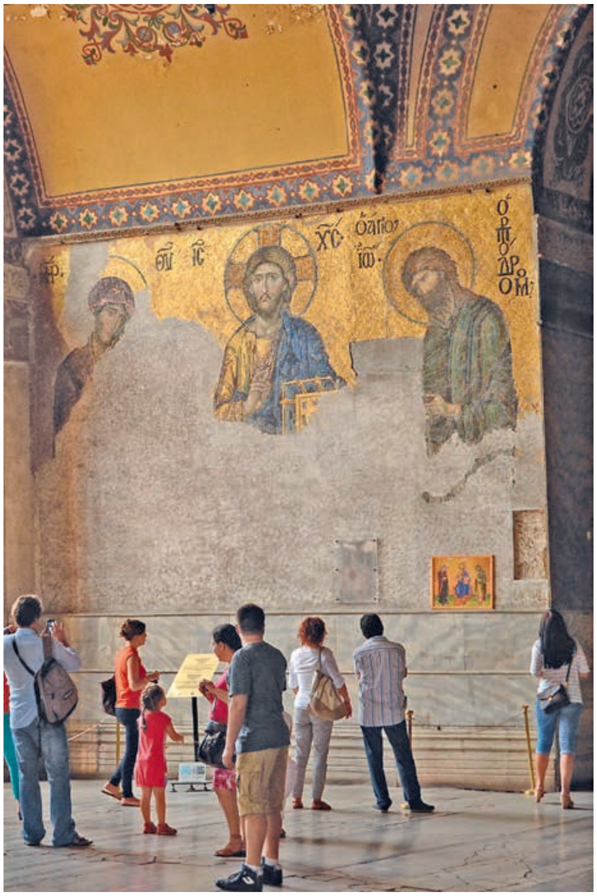


Figure 153 The enormous Deesis panel, south gallery, Hagia Sophia, Istanbul, thirteenth century.

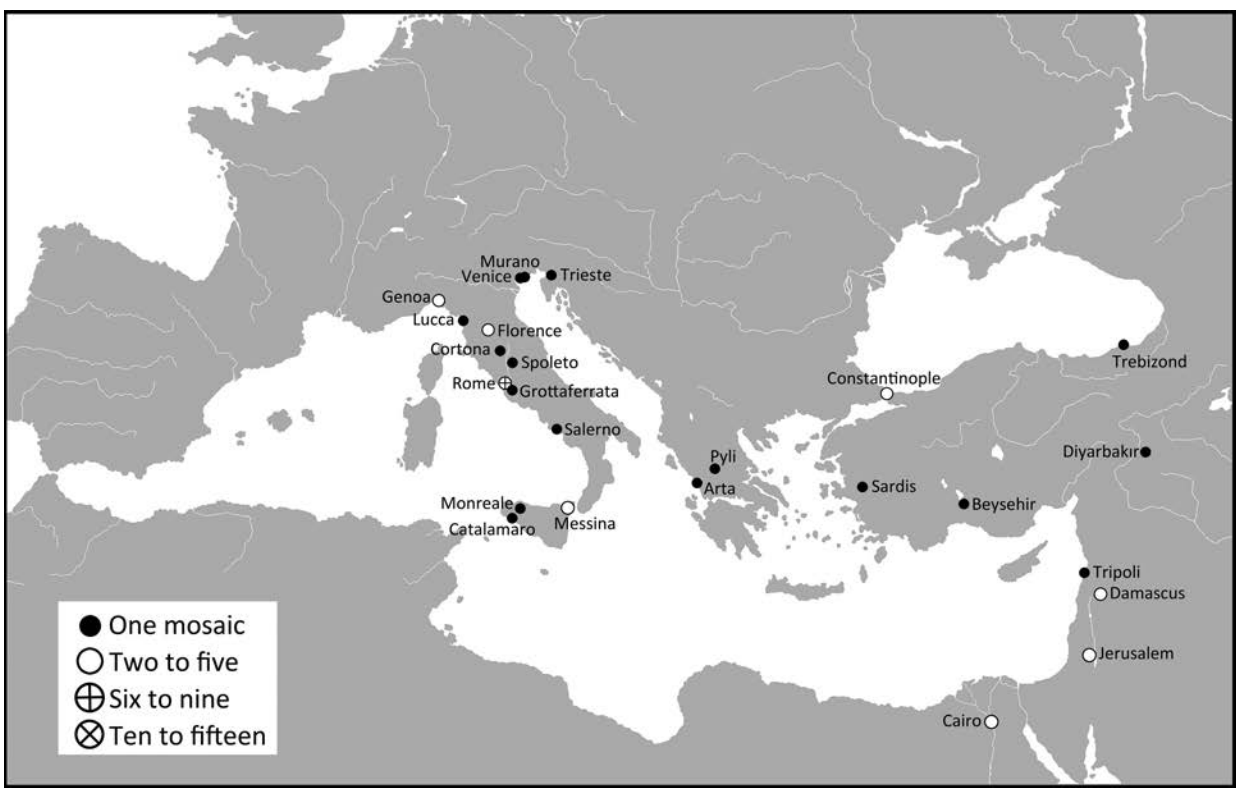
modelling of the faces in exquisitely small tesserae and the creation of subtle gradations of colour and shading come close to what might be expected in painting. There is another difference: the Byzantine mosaic is anonymous, neither patron nor artist is known (though damage to the mosaic may have removed traces of the former); at S. Maria Maggiore, the donor is present in the image, and the artist, Jacopo Torriti, has signed the work at the far left of the lowest border. And, after all the debates around mosaics of the twelfth century, little attempt has been made to see what might be 'Byzantine' in Torriti's work. In many ways, these two mosaics encapsulate the issues around mosaic that the thirteenth century raises, the changes between East and West and, perhaps above all, the gradual emergence of known artists.

Like the previous century, the thirteenth century was a good period for mosaic-making: it seems to have continued apace, especially in Italy. Forty-six new mosaics are noted on Map 10. Twenty-six come from Italy, with eight in Rome, and the rest scattered the length of the peninsula, both in places where mosaics already exist, such as S. Marco in Venice, Palermo and Murano (where these are repairs), and in completely new sites such as Florence, Cortona and Genoa. This trend is one that continued into the fourteenth century where yet more Italian cities chose mosaic as a form of church decoration. In Italy, moreover, mosaic was increasingly used not only on the façades of churches but also on tombs and as an important decorative element in church furnishings. Elsewhere, a sizeable number of mosaics – ten new and two restorations – come from the Islamic world, most within a restricted time period and from the Fatimid capital, Cairo, but Jerusalem and Damascus are also represented, as are the smaller towns of Tripoli in the Lebanon and Diyarbakır and Beysehir in Asia Minor.

In thirteenth-century Byzantium, seven new mosaics are recorded. Four are from Constantinople, where all but one date to after 1261; the remaining three reflect the restructuring of the Byzantine world in this century, coming from the Byzantine Empire of Nikaea and from the Despotate of Epiros. There is also evidence to suggest that a third Byzantine state, the Empire of the Grand Komnenoi in Trebizond, may also have patronised the art form (and I have included that city on the map). Written texts add ten additional mosaics to this total, plus a handful where the account is not specific about the medium of decoration used but it seems likely that mosaic was involved. Three of these mosaics were in churches in Constantinople, two were



Figure 154 The Coronation of the Virgin in the apse, S. Maria Maggiore, Rome, thirteenth century; mosaics by Torriti, commissioned by Pope Nicholas IV, who is the small kneeling figure in red to the left of Mary. Scenes from the Life of the Virgin, the Nativity, the Dormition and the Magi, are visible below.



Map 10 New wall mosaics in the thirteenth century

Fatimid mosaics in Cairo and one was a portrait of the Holy Roman Emperor and King of Sicily, Frederick II, from Cefalù.[1]

This continued growth in the use of the medium is an intriguing one. The period covered by this chapter and the next is one of major upheavals and reshapings of the medieval world. Right at the start of the century, there was a major reconfiguration of the Mediterranean for in 1204, the Fourth Crusade of Western Christian soldiers, led by the Venetians, sacked Constantinople, the greatest Christian city (*pace* Rome) of the medieval world, and replaced the Byzantine emperor with a Latin one. The deposed Byzantines established three power bases, each claiming to be the empire in exile, Epiros in northern Greece, Nikaea in western Asia Minor and Trebizond on the far eastern shores of the Black Sea, adjoining Georgia. Constantinople itself was recaptured from the Latins in 1261 by forces from Nikaea, and a new Byzantine emperor crowned in the city, but the Byzantine Empire never really recovered from these events. In size, it was but a rump of its former glory, encompassing little more than Constantinople, south-west Asia Minor and, gradually, parts of Greece. It was increasingly assaulted from the east by the Turks, and in 1453 the city was captured and the emperor killed, and the empire effectively ceased to exist. In the West, the events of 1204 were equally influential. The Sack of Constantinople and the creation of the Latin Empire boosted the Venetian state in particular, and helped Venice establish itself as a pre-eminent and wealthy sea-power. Rome enjoyed periods of peace and prosperity and endured hard times, the latter notably in its thirteenth-century conflict with the Holy Roman Emperor, Frederick II, and then later in the fourteenth century, with the removal of the papal court to Avignon in 1309 until 1377. In the Islamic world, pressure from the invading Mongols led to the fall of the Ayyubids and the rise of the Mamluks based in Cairo, though the Mongols themselves presented a threat to the Mediterranean world as a whole.

THE WEST

It has been suggested that the events of 1204 led to an increase in mosaic-making in the West, perhaps because mosaicists fled from Constantinople to Italy, perhaps because mosaicists were sent from Constantinople to Italy, and perhaps because a lot of tesserae were plundered and sent west along with the other looted Crusader booty. Unsurprisingly, I would question all of these premises. Whether Constantinopolitan mosaicists would have seen Italy and specifically Venice as their first port of call, rather than escaping to those territories still held by Byzantium after the West and the Venetians in particular had sacked their city, is one question. And whether mosaicists were in quite such short supply in the West after what has been seen of twelfth-century mosaic-making in Italy is another. Rather, perhaps the increasingly widespread use of mosaic in various city-states in Italy was a more localized phenomenon, a display of local pride and standing, a status symbol among the neighbours.

ROME

As Map 10 demonstrates, expanding on the mosaic-making of the previous century, the medium continued to be used in Rome throughout the thirteenth century, and played a significant role in the papal definition of the city.[2] Pope Innocent III (1198–1216) was a major patron, wealthy enough to sponsor building projects as well as precious objects. As mentioned in the previous chapter, he repaired the apse of

St Peter's, commissioning for it an enormous apse mosaic. This seems to have shown an enthroned Christ, flanked by Paul and Peter, with a river landscape running along the bottom fed by the four rivers of paradise. Below this, the familiar procession of sheep trotting out from Jerusalem and Bethlehem towards the Lamb of God was interrupted by the figures of *Ecclesia Romana* (the Roman Church) holding a standard and Innocent himself either side of the Lamb.

Innocent was only the first in a sequence of popes, including Honorius III and Gregory IX in the early part of the century and then later Nicholas III and Nicholas IV, all of whom seem to have taken it as a part of their papal duties to renew and restore the great Roman Early Christian basilicas.[3] Honorius III (1216–27), Innocent's successor, continued to sponsor works of faith in various media, from precious metals to a new liturgical feast at S. Maria Maggiore where he had been a canon. He too overhauled the great basilicas, notably S. Paolo *fuori le mura* and S. Lorenzo *fuori le mura*. Like Innocent, Honorius dramatically remodelled a church, this time the Benedictine church of S. Lorenzo, by commissioning a new church in front of the old: he demolished the apse of the sixth-century church and built a new church going out west from it, thereby reorientating the whole building. The new nave was built from *spolia* of great size and splendour. Although it does not seem that any new mosaics were added, the old sixth-century mosaics on the outward face of the original triumphal arch survived to become the inward face of the new sanctuary arch, visible not to the congregation but to the priesthood (see above, Fig. 98). The shrine itself appears to have had a late twelfth-century mosaic revetment, seemingly installed by Honorius before he became pope and then later remodelled again.[4] The mosaic frieze of the portico, a slightly later addition, commemorates the election of Peter II de Courtenay as the Latin Emperor of Byzantium in 1216: Honorius had consecrated him in Rome.[5]

At the great Constantinian basilica of S. Paolo *fuori le mura*, Honorius refurbished the fifth-century mosaics of Galla Placidia and Leo I on the triumphal arch and also in the apse (Fig. 155). Although the mosaic there now is nineteenth century, it is believed to copy the thirteenth-century image. It depicts an enthroned Christ, blessing with Paul and Luke to the viewer's left and Peter and Andrew to our right.[6] A small figure, identified through an inscription as Pope Honorius, kisses Christ's right foot. The original façade mosaic may also date to this early thirteenth-century period, depending on whether one prefers the argument that it was a commission of Innocent III, later restored by John XXII after 1320, rather than a commission of John XXII himself.[7]

In January 1218 Pope Honorius wrote a letter to the Venetian doge, Ziani, in which he thanked him for having sent a mosaicist to S. Paolo *fuori le mura* and asked for two more.[8] This has enabled art historians to detect 'Venetian' elements with a crypto-Byzantine component in the mosaics of S. Paolo – though since the mosaics there now are more nineteenth century than anything else, this seems wildly optimistic.[9] Quite how the Pope's letter should be interpreted is debatable. It may reflect a shortage of Roman mosaic artists, though in light of Innocent's work at St Peter's and the sheer quantity of Roman mosaic, it seems unlikely that the letter proves that there were no mosaicists in Rome. Perhaps there was a shortage of mosaicists for the volume of work available. Or perhaps it can be understood as an example of what was so much a feature later in the fourteenth and fifteenth centuries when patrons, including popes, regularly employed artists from elsewhere because they were perceived as

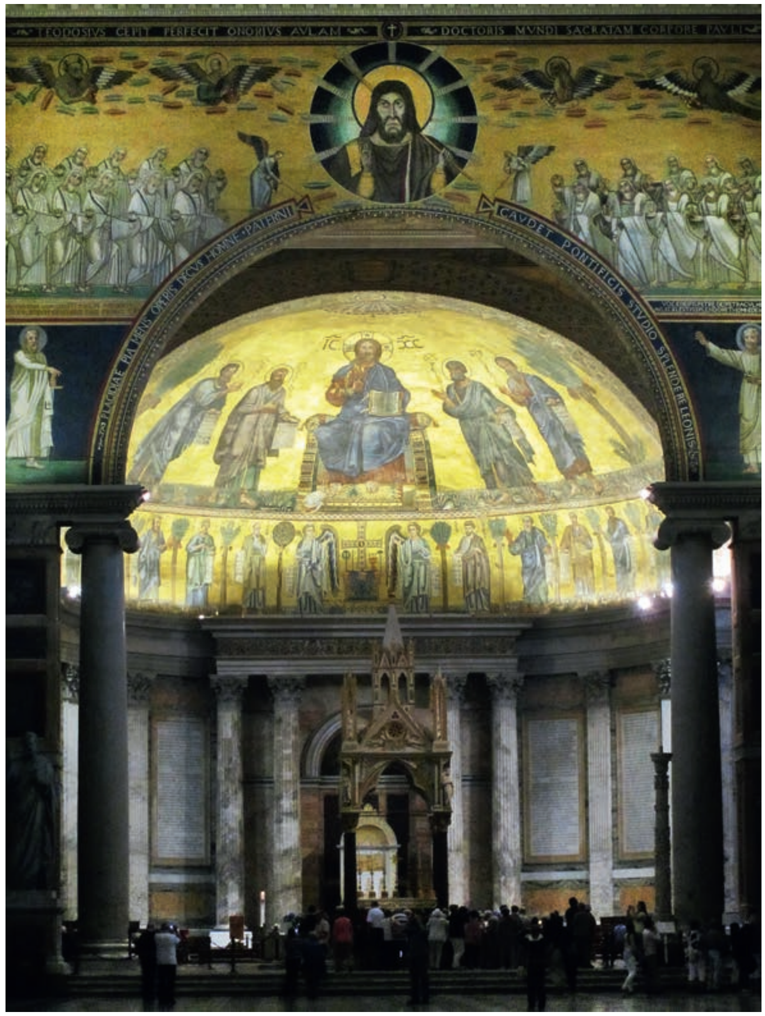


Figure 155 The apse and triumphal arch of S. Paolo *fuori le mura*, Rome, which were both fifth century and thirteenth century but which were substantially remade and reset in the nineteenth century. Pope Honorius III kisses Christ's right foot.

better or different from or more fashionable than the artists to hand.

From about the same time as S. Paolo, a mosaic was attached to the façade of S. Tommaso *in Formis* (the church itself does not survive), dated to 1218.[10] It takes the unusual form of a roundel, in which Christ is shown enthroned, grasping white and black captives, both shackled, a reference to the charitable work of the Trinitarian Order, to whom the church belonged, and its freeing of slaves. The patron is unknown and the subject unparalleled; it has been suggested that it may have derived from the seal of the Order. It is an unusual example, but its existence suggests a whole level of small-scale mosaic-making by Roman artists not otherwise visible.

An inscription ascribes the mosaic to one Master Jacopo and his son Cosmatus, and they introduce the Cosmati family and 'Cosmati work'.[11] This last term is used to refer to the elaborately patterned pavements made from small cut stones and to inlays using glass, including gold glass, cut to size and often resembling mosaic tesserae, forming part of the floors and also often incorporated into sculpted church fittings such as baldacchini, altars, candlesticks and even tombs. Twelfth-century examples of such inlaying in mosaics were mentioned briefly earlier, in part in the context of the Islamic

world, as existing in Sicily, and at Rome's S. Clemente, and in the Church of the Nativity. In the thirteenth century, however, such inlays are very much associated with art in Rome, though they were increasingly found throughout thirteenth-century Italy. At Poreč, for example, a ciborium of *c.* 1277 was decorated with mosaic, close to what is identified as Cosmati work, and inlaid columns survive from the cloisters at the Lateran and at Monreale.[12] The use of glass 'Cosmatesque' inlays on tombs, often together with panels of figural mosaic, became an increasing feature in the twelfth, thirteenth and fourteenth centuries.[13] This seems to be a more limited use of mosaic, rather like that at S. Tommaso *in Formis*, by cardinals and bishops, less costly than a mosaic needing an entire church for its display, but certainly a way of emphasising via the tomb an individual's status. One mosaic panel, depicting the Virgin, Christ and the donor, survives from the Capocci Tabernacle, dated to the 1250s or 1260s, and originally located in S. Maria Maggiore.[14] Unusually for late medieval (Italian) mosaics, this uses silver tesserae, including single pieces of inlay for the Virgin's shoes. Also in S. Maria Maggiore, the tomb of Bishop Gunsalves still has a mosaic in the niche above the tomb. The bishop is shown to the left at the feet of the Virgin and Christ and Saints Matthias and Jerome stand to left and right. Gunsalves died in 1298, making the mosaic very late thirteenth century in date; it is inscribed as the work of John son of the Master Cosmatus. The tomb of Bishop Guillame Durand in S. Maria *sopra* Minerva is very similar (*c.* 1304): another bishop's tomb, the mosaic in the canopy showing the Virgin and Child with St Dominic and St Privato, a French saint for this French bishop. And in S. Sabina, the tomb of Muñoz de Zamora, who died in 1300, is marked by a floor slab which uses glass in a mosaic fashion. Popes too used mosaic on their tombs. A mosaic fragment showing the Virgin (now in Brooklyn) has been identified as part of the funerary monument of Boniface VIII from St Peter's, which was the work of Arnolfo di Cambio with the mosaics ascribed to Jacopo Torriti.[15] Although this book is not concerned with Cosmati work and with inlay as such, both art forms do share similarities with wall mosaics and possibly artists; and the use of glass and tesserae employed in these ways implies that mosaic was a live enough medium to be cleverly adapted in a way that is reminiscent of its original use in the third century on nymphaea. The other point to note both from the mosaic of S. Tommaso and from the tomb of Boniface VIII is the presence of artists' names, an aspect increasingly visible in thirteenth-century Roman mosaics.

In the early years of the thirteenth century, it is apparent that popes had enough money and other resources to be energetic and enterprising patrons of the arts, often supported by groups of wealthy cardinals – and it is worth noting that there were increasing numbers of French cardinals among them, adding to the variety in patronage.[16] But increasingly the papacy became involved in conflict with Frederick II (Holy Roman Emperor 1220–50), the so-called 'stupor mundi', 'wonder of the world' because of his political ambitions and his glittering court. Frederick, as emperor, ruled Germany, Italy and Burgundy. He had been crowned king of Sicily at the age of three, and additionally held the title of king of Jerusalem. His territories bordered those of the popes to north and south and, powerful and ambitious, he was frequently in conflict with them, notably Gregory IX (1227–41) and Innocent IV (1243–54), to the extent that he was excommunicated four times. The almost continuous hostility and warfare in the 1220s to 1250 greatly reduced the papacy's financial capabilities, as available money went on fighting rather than decorating and refurbishing churches. This

may be one reason why both wall painting and mosaic were practised on a modest scale, used for tomb monuments and devotional commissions rather than church walls. Papal absences did not help. Innocent IV was forced to flee Rome in 1244 for France in order to escape Frederick, and he did not return until 1253. His major works of patronage not surprisingly fell outside the city and revealed French influence, a major stained-glass programme at Assisi for example.[17] It was not until after Frederick's death and the accession of Nicholas III (1277–80), from the great and wealthy aristocratic family of the Orsini, that large-scale artistic patronage in Rome seems to have revived.

Despite his troubles with Frederick II, Gregory IX had found the resources for some artistic patronage. He restored the façade of St Peter's, adding a new mosaic of which the heads of the pope himself and of St Luke survive.[18] The overall image may have had three registers, with the twenty-four Elders on the lowest level, then a band of acclaiming evangelists, and, above them all, the evangelist symbols flanking an enthroned Christ, Virgin and St Peter, with the pope at his feet. This is a mixture of apocalyptic imagery familiar from earlier Roman mosaics from as far back as S. Pudenziana, if not St Peter's itself, with the donor's own figure included in the blend. The Vatican façade had been covered with mosaic in the fifth century in the time of Leo the Great, and so we see here once again papal renovation of existing venerated spaces. Innocent IV had also carried out some work at the Vatican, though no evidence of what he did survives. From the mid-thirteenth century also comes the Virgin and Child mosaic in the Zeno Chapel of S. Prassede, though its sponsor is not recorded.[19]

Nicholas III, backed by family wealth, was a major restorer of buildings, adding the Chapel of St Nicholas and a palace to the Vatican, for example, as well as important restorations at the Lateran, including the Capella Sancta Sanctorum, the palace chapel of the pope.[20] The mosaic there is in the shallow barrel vault and shows a half-figure Christ held by four flying angels, vaguely reminiscent of the Zeno Chapel in S. Prassede. The lunettes depict Peter and Paul, Laurence, Agnes, Stephen and Nicholas: relics of these last four are in the chapel. Three lunettes on the reverse of the altar wall portray hanging lamps in mosaic. The distinction in the materials used in the Cappella (the shift from mosaic to paint) actually follows the separation between the sanctuary (mosaic) and the main body of the church (paint). This reservation of mosaic for the holiest parts of the church is one visible throughout the Middle Ages, from S. Paolo *fuori le mura* in the fifth century to Poreč in the sixth and S. Prassede in the ninth: the same will be the case in Nicholas IV's work at S. Maria Maggiore and indeed in Byzantium in the fourteenth-century Chora Church. How far this differentiation reflected a shortage of resources (monetary or material) or was a deliberate choice is never made explicit: it may well have varied from site to site.

The Sancta Sanctorum mosaic is the first surviving figural mosaic from Rome since the panel of the Capocci Tabernacle of 1256. There is another gap of about ten years before the next surviving mosaic programme, Nicholas IV's Lateran apse, though this should not automatically be seen as necessarily anything more than chance of survival. The work of Torriti and Cavallini at the Lateran, S. Maria Maggiore and S. Maria in Trastevere suggests that these were not those artists' first forays into the medium.

Pope Nicholas IV (1288–92), the first Franciscan pope, used mosaic on a huge scale, installing two of the largest and most significant artistic commissions of the thirteenth century in his rebuildings of the Lateran and of S. Maria

Maggiore. At the Lateran, the papal cathedral, the project was vast. The Lateran façade was rebuilt and given mosaics.[21] The Constantinian apse was demolished and replaced with a larger one with new mosaics between 1287 and 1292, and Nicholas also added an ambulatory.[22] The apse mosaics (Fig. 156) were redone (rather unpleasingly) in the nineteenth century, but it is widely accepted that the programme was little altered. If so, then Nicholas' apse mosaic contained many Early Christian elements and may thus in turn have echoed its own predecessor.[23] The focal point of the mosaic now is a bust roundel of Christ which may possibly have been a part of that original Early Christian mosaic.[24] Below this is a large jewelled cross flanked by the Virgin and the Baptist. The four rivers of paradise flow from it, and deer drink from these (think of S. Clemente). More animals are present in the border, and a dove hovers above the cross. Below this stands a collection of saints: Peter, Paul, and Francis (at a smaller scale), on the side of the Virgin; John the Evangelist, Andrew and a small St Anthony of Padua with the Baptist. Nicholas himself is present, kneeling at the feet of Mary. Beneath are the remaining nine apostles and at their feet are two small kneeling figures dressed in the



Figure 156 The apse of the Lateran, Rome, showing the nineteenth-century mosaics that replaced the thirteenth-century mosaics of the artist Jacopo Torriti under the commission of Pope Nicholas IV. The bust of Christ may or may not be fifth century.

robes of Franciscan friars. One is identified by inscription as 'Brother Jacopo of Camerino, assistant to the master of the work'; the other is not identified but is surely the master of the work himself, Torriti, who had signed his name ('Jacopus Torriti pictor hoc opus fecit') in the apse itself.[25]

The presence of Francis and Anthony was unprecedented in Rome – the patron saints (and only recently dead and canonised at that) of a specific religious Order, the Franciscans, favoured in a papal basilica and in the company of the apostles too. Along the bottom, a donor inscription celebrated the pious works of Nicholas, presenting his intervention as the continuation of the basilica's Early Christian heritage by calling attention to his salvaging of the bust of Christ at the apex of the apse, and hailing him as 'son of the Blessed Francis'. These were bold and assertive moves, so bold that they met with hostility: a story was told of Nicholas' successor, Boniface VIII, wanting Anthony removed fom the apse, only for the saint himself to intervene. Incidentally, that story intimates that work on the mosaic was not complete until after Nicholas' death.

Nicholas also had a pair of monumental mosaic inscriptions set in the church. One detailed the relics held in the church. The other, either on the wall of the main apse or by the entrance to his new ambulatory (it is now by the door to the sacristy), is dated to 1291 and specifically associates the papal rebuilding with the Vision of Innocent IV and thus with St Francis himself. Innocent (who had approved the Rule of the Poor Clares, the female branch of the Franciscans) had had a vision in which he saw the weight of the Lateran supported by a 'little poor man', preventing it from falling. Interpretation of this had been a source of dispute, for the Franciscans had identified the 'little poor man' with their own Francis whilst the Dominicans knew him to be St Dominic. The presence of Francis in the new apse mosaic of the Lateran highlighted the Franciscan version of the story and gave it Nicholas' papal seal of approval. So it seems from inscription and apse mosaic alike that Nicholas had both a personal and a political vision in his work in the Lateran: his salvation; his Franciscan identity; his papacy as the historical consummation of Innocent's Vision; the greater glory of St Francis. Not only was the mosaic commissioned by a pope who was a Franciscan, it was executed by two artists, Jacopo Torriti and Brother Jacopo, who were themselves members of the Order. Torriti moreover was Nicholas' favoured artist: he was a leading painter in the early decoration of the new Upper Church of St Francis at Assisi, another project supported by Nicholas, and he disappeared from there to come back to Rome and work on Nicholas' second great mosaic commission, that of S. Maria Maggiore.

In many ways, Nicholas' work at the Lateran can be seen as a reassertion of that site over St Peter's and the Vatican (which were dominated by the work of Nicholas III and his family, the Orsini), but one that furthermore placed Francis and the Franciscans as central figures in the faith.[26] Both of these elements are also apparent in his patronage at S. Maria Maggiore. Here, in the fifth-century basilica, Nicholas had the apse moved back about 6.5 metres, thus causing the old apse and its mosaic to be demolished, and he inserted a transept. These were very similar architectural changes to those at the Lateran and they made both churches more like St Peter's and S. Paolo *fuori le mura* in plan. Between *c.* 1290 and *c.* 1325 (the date range varies by art historian – these dates are the two widest), new mosaics were installed in the apse by Torriti (Torriti's inscription in the apse gives a date of 1296) and on the façade by Rusuti.[27] Nicholas was also responsible for the painted

cycle in the transept and the mosaics on the exterior of the apse.

The apse mosaic of S. Maria Maggiore is where this chapter started (see Fig. 154). It is the largest single image surviving from thirteenth-century Italy. It depicts the Coronation of the Virgin, with Christ and his Mother seated together, both off-set from the centre of the apse. The roundel in which they are located also contains stars and the sun and moon, suggesting it should be understood as the vault of heaven. On either side is a crowd of adoring angels and saints. To the viewer's left, Pope Nicholas kneels closest to the roundel next to St Peter (he is identified by inscription, and the text that originally ran around the lower level of the border asked Francis to protect him). Beyond him stand Peter, Paul and Francis. To our right kneels the pope's friend, the titular cardinal of the church, Giacomo Colonna, also at a smaller size, and followed by the standing figures of John the Baptist, John the Evangelist and Anthony. The rest of the apse above their heads is filled with luxuriant vine scrolling and birds, whilst the crown of the apse is occupied by the ever-popular canopy of heaven. Below, fish, waterfowl and boating putti, even a river god beneath Francis' feet, pouring the river from his water pot, and a ship remarkably similar to second- or third-century Roman ships (see the ship on the panel from the house of Claudius Claudianus, above, Fig. 63), share the river of life. Five narrative scenes from Mary's life are shown below (in the order in which they are shown, the Annunciation, the Nativity, the Dormition at the centre, the Coming of the Magi and the Presentation of Christ in the Temple).

Overall, the programme was more adventurous than that of the Lateran. The scene and the ways in which it was depicted reflected both traditional Roman and more contemporary north European models.[28] Francis and Anthony were present once more, but on a larger scale than in the Lateran. The Coronation of the Virgin (as opposed to images of her already crowned) was a relatively new development in Western iconography (it was never used in Byzantium), widely understood as deriving from France, where it had been widespread since at least the twelfth century. It was also a theme popular among the Franciscans. This is one of its earliest monumental representations in Italy. The scene may also carry an eschatological reference to the Woman of the Apocalypse (who was said to be Mary), which would in turn echo something of the fifth-century mosaics that survive on the triumphal arch, which had now become detached from the apse and located further down the church. The placing of the Dormition below the Coronation made reference to the Assumption of the Virgin into heaven. And despite the emphasis he placed on Francis, Nicholas was also devoted to Mary and she is a major figure both here and at the Lateran. The structuring of the scene – putting it inside a roundel almost like a window – was inventive and may evoke the rose window at the west end of the church, also a new feature in Italian architecture, one derived from Gothic architecture, and a part of Nicholas' rebuilding programme. It is possible that the vine scrolling and the canopy were an echo of the original fifth-century mosaic (like in the Lateran Baptistery); equally, they and the putti may reflect thirteenth-century interests (both are found at S. Clemente), as may the other allusions to Classical art. These are impressive and technically assured mosaics. The detailing is very fine: chequerboarding, for example, is clear in the modelling of faces; very small tesserae are used in the details of flesh and drapery; the gem on the Virgin's right wrist is made from a single cut rock crystal. Torriti may well also have been influenced by what he had seen in the

working of textiles and embroideries, especially that known as *opus anglicanum*, 'English work', a fantastically detailed form of embroidery using gold thread, of which Nicholas was an admirer.[29]

On its outside, the apse also had a series of lunette-shaped mosaic panels depicting four standing female martyrs either side of a central Virgin and Child, who were on a larger scale.[30] Below the Virgin and Child was a scene of the Magi, perhaps in reference to the crib, the most sacred relic of the church, but also making a reference to the venerated icon of the *Madonna Salus Populi Romana* held within the church. The front façade, the work of Rusuti, has Christ in the middle with the cardinals and the brothers Giacomo and Pietro Colonna placed to either side, and the Colonna arms at several points on the façade. Saints flank them; the evangelist symbols are above; and below, probably part of the same commission, are four scenes depicting the Foundation of the Church by Pope Liberius.[31] Pope Nicholas is not pictured, so was probably dead by this time. But the work must predate 1305, for by that time Rusuti and his workshop had left Rome for France and the employ of King Philip IV – as painters.[32]

S. Maria Maggiore and the Lateran were both hugely expensive projects and it seems probable that it was only through the support (financial and otherwise) of his backers, the aristocratic Colonna family, enemies of the Orsinis, that Nicholas could have afforded to commission the rebuilding on this scale. The Colonna may well have finished what Nicholas began at S. Maria Maggiore, explaining their presence in the apse and façade alike, though it will have to have been completed by 1297 when the Colonna cardinals were excommunicated by Pope Boniface, and stripped of their property and benefices. But however much Colonna support he had, it was Nicholas IV, the first Franciscan pope, who was the moving spirit at both churches. The relationship between his two projects, in terms of their relative timing, is unclear. It has been suggested that Nicholas moved to S. Maria Maggiore, a church for which he had much affection and where he was buried, because his building works at the Lateran made that church uninhabitable. But his work at S. Maria was on a similar scale and that church is unlikely to have been any more usable.

Nicholas' interest in mosaic has been seen as unusual, a result of his time as a papal legate in Constantinople in the early 1270s and his knowledge of S. Pudenziana, his own titular church. However, given that the major papal basilicas were already decorated in mosaic, given that these mosaics were constantly and consistently added to, renovated and repaired by popes, and given the significance of mosaic as a medium in Rome, it seems an entirely consistent, if impressively large-scale, use. More remarkable, perhaps, are the choices of iconography Nicholas made and the associations that they have with northern European, specifically French, art, with the Coronation of the Virgin for example, perhaps a result of the time Nicholas spent in Paris. His artistic patronage is, in fact, notable more widely: his name is connected with church building, fresco painting, works in panel painting, goldsmiths' work and embroideries, and much of this was also related to his devotion to St Francis and the saints of his Order. This is somewhat ironic, given the Franciscans' uneasy relationship with pictorial decoration, but Nicholas clearly viewed images as important instructors in the faith.

The renewal of the Lateran and S. Maria Maggiore bear witness to the formidable level of Nicholas' artistic patronage, but he was also active elsewhere both inside and outside Rome. S. Maria in Aracoeli on the Capitoline Hill had been a Benedictine church since the ninth century until 1249–50, when Pope Innocent IV gave

it to the Franciscans, who rebuilt it. The (now largely lost) façade mosaic, depicting Innocent's Vision, may have dated to this rebuilding but more probably considering its subject matter came from Nicholas' papacy.[33] Other surviving interior mosaics from the church have a similar Franciscan theme: one panel shows the donor under the aegis of St Francis worshipping the Virgin and Child, with the Baptist on the other side of the group, the figures grouped almost like a painted altarpiece. Another piece from the Aracoeli, a mosaic retable of perhaps 1294 now in the Palazzo Colonna, highlights the Colonna association again: Giovanni Colonna, brother of Nicholas' friend Cardinal Giacomo, is shown presented to the Virgin and Child by St John the Evangelist, his name saint, and St Francis. Beyond the city, Nicholas commissioned Orvieto Cathedral, another site of Colonna influence, and Nicholas' favoured base outside Rome, as a copy of S. Maria Maggiore.

The pope's vast Roman mosaics are often overshadowed in the art historical literature by another of his commissions, the church dedicated to St Francis in Assisi and its frescoes, begun in 1288.[34] But in their day, it was the Roman churches that were the more spectacular, the more costly and the more prestigious, and that demanded the recall of Nicholas' favoured painter, Torriti, from Assisi. In contrast, Assisi was a small town, Francis a new saint, the church relatively small and the building decorated in paint. Why Nicholas did not use mosaic at Assisi, which he could have done, is intriguing.[35] It may have been for reasons of cost and logistics; perhaps for reasons of speed; perhaps a reflection of the relative importance of the church at Assisi and the churches of Rome. Was mosaic regarded as a medium best suited for Rome? Only in Rome is mosaic found in mendicant churches; only in the city do artists such as Torriti and Rusuti appear to work in mosaic.

At about the same time as Torriti was working in S. Maria Maggiore, in S. Maria in Trastevere Pietro Cavallini was installing a set of six mosaic panels showing scenes from the Life of the Virgin below the already existing twelfth-century apse mosaic of Christ embracing his Mother, and also signing his work, in this case as 'pictor romanus'.[36] Four of Cavallini's scenes, Annunciation (Fig. 157), Nativity, Magi, Presentation and Dormition, are the same as those in S. Maria Maggiore but here the order is strictly chronological. A panel below the central window of the apse shows the patron, Cardinal Bertoldo Stefaneschi, being presented by Peter and Paul to the Virgin and Child, enclosed in a rainbow mandorla. Why these mosaics were installed is unclear. It is likely that they were intended to affect responses to the central apse mosaic, and both they and the apse were framed by another mosaic, now lost, on the triumphal arch. But Torriti's apse in S. Maria Maggiore has been seen as a response to that of S. Maria in Trastevere, where Cavallini's panels answer in turn to Torriti's work, supposedly bringing the church up to date. A battle of patrons was potentially being fought between the Colonna at S. Maria Maggiore and the Stefaneschi in S. Maria in Trastevere, for both apses are strikingly alike in their emphasis on the importance of Mary.[37]

Suddenly, with these thirteenth-century Roman mosaics, there are more names – patrons, patrons' friends, allies and enemies, patrons' preferred artists. This makes it possible to see more clearly the currents between individuals that must have been played out on countless occasions in the renewal of these churches. Cardinals, above all those with personal wealth, patronised art, especially when they could get a toe-hold in the great papal basilicas. Programmes of patronage were carried out in response to those of previous popes, and there is an increasingly visible emphasis on family rivalry amongst the Roman aristocracy: the



Figure 157 The Annunciation, one of the scenes from the life of the Virgin by Pietro Cavallini added to the programme of mosaics in S. Maria in Trastevere, Rome, thirteenth century.

Colonna, via Nicholas IV, outdoing the Orsini pope Nicholas III, for example; the Stefaneschi staking their claims. This is a trend that will also be apparent in the fourteenth century in mosaic and is very much a typical aspect of patronage in other media from the fourteenth century on in Italy.

Artists' names too really start to appear in the period 1280–1320, marking the beginning of the traditional pronounced emphasis on artistic personality.[38] At least 104 individuals involved in mosaic-making can be identified between 1270 and 1529.[39] One of the earliest recorded is Andrea Tafi (1250 to some time after 1320), highly rated in his own time as a mosaicist. According to Vasari's *Lives of the Artists*, Tafi went from Florence to Venice to learn how to make mosaics, and returned, with the Venetian mosaicist Apollonio, to work with him on the Florence Baptistery.[40] Vasari, writing in the sixteenth century, had a low opinion of mosaic as a medium, a view coloured by his own biases and interests, and did not waste individual space on Torriti, confining him to a brief mention in Tafi's life, with the result that little is known about him and he is little celebrated, but that is another story.[41] In contrast, Cavallini did have a *Life* of his own, and because he was also a well-known and well-respected fresco painter there is considerable debate about where the mosaics of S. Maria in Trastevere fit into his work. The mosaics certainly seem to belong to the 1290s, but whether to before or after Cavallini's work on the frescoes of S. Cecilia is a subject of fierce debate.[42] After 1308, Cavallini is known to have worked in Naples, together with Rusuti, painting, but he returned to Rome before 1325 and began work on the façade mosaic at S. Paolo *fuori le mura*. A further mosaic of an enthroned Virgin with her Child and Saints James and Crisogono, now in S. Crisogono (it was moved there in the sixteenth century, but the presence of St Crisogono suggests it may have been made for the church), is thought also to be his work.[43]

Additionally, with the arrival of names and of the presence of certain artists in Vasari's work, suddenly some of the art historical terms for

discussion about mosaics shift. No longer is 'looking Byzantine' seen as the same sort of asset that it was in the study of twelfth-century mosaics; rather, Torriti's apse at S. Maria Maggiore has been called the 'finest of the Roman medieval mosaics' whilst his scenes of the life of Mary are supposedly the first great 'Early Renaissance' mosaics.[44] They are contrasted with Cavallini's work, often seen as 'better' because 'more naturalistic', closer to those qualities so admired in Renaissance art. It is an interesting disciplinary shift from a privileging of 'Byzantine' in a 'medieval' context to a preference for the 'Early Renaissance' in a Vasarian fashion, encapsulating some rather unconsidered art historical practices.

After this grumpy dismissal of style labels, the events of the thirteenth century also underline what we have seen throughout this book in terms of Rome: that at any time, the needs of the great Roman basilicas could be guaranteed both to loosen papal purse strings and to boost papal prestige. The thirteenth century did see some new building, S. Maria *sopra* Minerva for example, but buildings take time and money, and the popes in this period were often elderly men. To make a mark in their own lifetimes, façades, single mosaics and frescoes were all quicker and cheaper. In the thirteenth century, Innocent III and Honorius III renewed the Vatican, S. Paolo *fuori le mura* and S. Lorenzo *fuori le mura*, all important Early Christian churches;[45] Gregory IX restored the façade of the Vatican; Nicholas IV, S. Maria Maggiore and the Lateran. This papal patronage reflected changing ecclesiastical pressures: the need to retain and redevelop dramatic and eye-catching settings for the liturgy; the increase of Marian devotion linked to the growth of the Franciscans; and the Jubilee of 1300, a holy year convoked by Pope Boniface VIII for the forgiveness of sins, the first such celebrated, providing a further incentive for restoration and renovation. St Peter's, the Lateran, S. Paolo *fuori le mura*, S. Lorenzo *fuori le mura* and S. Maria Maggiore were always the most important and dominant churches in Rome, the places where popes and cardinals alike wanted to be buried.[46] These great ancient basilicas remained directly governed by the papal administration and were responsible for key functions, notably the papal stational liturgy; all served as pilgrim churches. But throughout their histories they also connected the Apostolic Age, the age of Peter and Paul, to the present age. They might be repaired, renewed and cleaned up inside (S. Paolo), developed to a larger scale and made more able to accommodate pilgrims (S. Lorenzo), refurbished as a counterweight to St Peter's (the Colonna Lateran versus the Orsini St Peter's) or made to match up to St Peter's (S. Maria Maggiore) but they remained recognisably the churches believed to have been founded by Constantine himself over the tombs of the Apostles and martyrs. It was small wonder that, time and again, popes paid them special attention.

The later thirteenth century was a period when antique and Early Christian frescoes and mosaics were increasingly being rediscovered and cherished in Rome.[47] These played a persuasive role in influencing and changing the likes and requirements of patrons and publics. New themes became popular and older themes – Peter and Paul; the story of Pope Sylvester and the Conversion of Constantine as shown at the Church of the Quattro Coronati – gained a new lease of life. Mosaics started to be increasingly used on façades, where they would certainly last better than paint.[48] But the Early Christian material, both already known and freshly discovered, served a central and constant purpose in Rome, the renewing of ideas about the Apostolic and Constantinian city. The *tituli* below the new mosaic in the new apse of the Lateran connected the restoration of the mosaics with Early Christian miracle stories of God-created images

made without human intervention. And Rome itself remained a symbolic and physical imitation of the heavenly and terrestrial Jerusalem (never Constantinople). But it needed also to move with the times, to respond in turn, for example, to Venice's challenge in the form of S. Marco and overmatch that church. It needed to create the spaces for the mass of pilgrims that flooded into the city, to appeal to the Romans themselves who worshipped on a daily basis in these same buildings. By the thirteenth century, mosaic as a medium had moved from a symbol of imperial Rome to one of Petrine and papal Rome.

FLORENCE AND ELSEWHERE

Towards the end of the century, just as Nicholas was renovating and commissioning new mosaics in Rome, so the medium had a burst of popularity in Florence. A new cathedral was built there towards the end of the century, financed by the communal government of the 1290s, and perhaps as a result of general unhappiness with the great local families' exploitation of church wealth; and Gaddo Gaddi was commissioned to produce a mosaic of the Coronation of the Virgin for the inside of the façade.[49] There was considerable mosaic activity in the 1260s and into the fourteenth century, financed by the Calimala (Cloth Importers) Guild in the octagonal baptistery of the cathedral (built in the eleventh century on the site of an Early Christian octagonal baptistery which may have been mosaicked). This included a spectacularly vivid Last Judgement above the high altar and a lavishly mosaicked dome in five registers encompassing choirs of angels, scenes from Genesis including the story of Joseph, and pictures of the lives of Mary, Christ and, appropriately, St John the Baptist.[50] Another mosaic, the Coronation of the Virgin, is located inside above the main door of the cathedral. A third church, at S. Miniato al Monte, on the edge of the city, also had mosaics commissioned by the Calimala. There was a mosaic in the apse, dated by inscription to 1297, and ascribed to a team of seven artists. This shows Christ enthroned with the Virgin and S. Miniato, as well as evangelist symbols and flora and fauna, evocative of the Early Christian mosaics of Rome but perhaps, as with the atrium of S. Marco, Venice, a use of that Early Christian past to establish current authority.[51] On the façade, Christ was depicted between the Virgin and S. Miniato: when it catches the sunlight, this is a highly visible and very impressive piece of work.

The Florence mosaics were not the only new mosaics in thirteenth-century Italy. At Lucca, another large external mosaic, a scene of the Ascension, Christ, angels, Mary and the twelve apostles, survives on the west façade of the church of S. Frediano (Fig. 158). Although the church is dated to 1112–47, the mosaic tends to be dated to the mid- to late thirteenth century. In Genoa too, there is some evidence for mosaic-making on the façades of the Cathedral of S. Lorenzo and the Church of S. Matteo. At Spoleto, the upper level of the façade bears a mosaic of a blessing Christ, flanked by the Virgin and the Baptist, and dated to 1207.[52] In the south apse inside Salerno Cathedral, some rather damaged thirteenth-century mosaics survive. The top half of the small apse is occupied by a monumental standing Archangel Michael. Below, four saints stand on a plain gold background, with a tiny (and now rather battered) donor image of Giovanni da Procida crouched at the feet of the central seated figure of St Matthew.[53] The northern apse has the remains of a mosaic showing the Baptism of Christ.[54] Both have suffered restorations. There is another mosaic of Matthew in the lunette above the main door which may belong to the same period. The mosaics of Christ with SS. Giusto and Servolo in the main apse of S. Giusto, the



Figure 158 Façade of the Church of S. Frediano, Lucca, thirteenth century. Although sunlight tends to wash out the colours on façade mosaics, it brings the gold backgrounds dramatically to life.

cathedral of Trieste, are believed to date from the late twelfth or the early thirteenth century.[55] In Sicily, in both Messina (S. Gregorio and S. Maria *fuori le mura*) and Palermo (the cathedral), new mosaics were installed, suggesting that the tradition of the twelfth century had not died out, and that mosaic was still regarded as an important medium. Who made all of these mosaics is not known, nor from where the materials and ideas came, nor really why there should have been this burst of activity, but given the mosaic-making of Rome and Venice, it is perhaps unnecessary to emphasise that patrons did not have to look beyond Italy for their inspirations.

VENICE

In thirteenth-century Venice, mosaic was a local medium, one made in the city by Venetian artists, but one which carried a great deal of prestige, in its intimations of Rome and Byzantium alike. Its use in the city continued to be a source and a statement of civic pride, both in the use of the medium and in the prestige of the city's mosaicists.

Although by 1200 S. Marco must have looked spectacular with a very full mosaic programme, and indeed façade mosaics, this did not prevent its extension in the thirteenth century. New mosaics were gradually installed beyond the vaulted areas visible from the nave, the transept and the main entrances into other parts of the building, including the side walls and the new builds of the Cappella Zen, the narthex and the reconstructed façade with its addition of plunder from Constantinople. Damage by fire and earthquake may have made some repairs necessary, but much was also new within the church. The scenes chosen to be presented in mosaic varied, from scenes from the life of Christ extending and elaborating the already existing cycle – Christ's Agony in the Garden of Gethsemane, for example (shown earlier as Figs. 2 and 3) – to those with a more local and Venetian significance: the life of the important Western Christian saint Leonard and many further images of St Mark, including the recovery of the saint's

relics, shown in the south transept inside the church, and the translation of his relics, outside above the west doors. The atrium was transformed into a narthex along the west and north sides of the church and gained a whole Old Testament cycle based on the Book of Genesis, from the Creation to the story of Moses, as well as assorted saints. The style and iconography of these Old Testament mosaics is very close to that of the fifth- or sixth-century manuscript of Genesis known as the Cotton Genesis, a choice of imagery filling a variety of roles.[56] These mosaics in their existence as mosaic may be a comment on the familiar theme of Venice's relationship with Byzantium. But the adoption of Genesis images is also one found elsewhere in Italy – in mosaics at Monreale, for example – and the association of the mosaics with Early Christian iconography was perhaps another Venetian response to the Early Christian mosaics still visible in Rome. The extension of the mosaic programme has been seen as a riposte to the vast Norman programmes on Sicily, but the largest mosaic cycle in Italy – and certainly the most important – was surely that in St Peter's, itself spruced up in the thirteenth century, and so we might see this as another aspect in the struggle for status between Venice and Rome.

Although much Venetian propaganda at this time dealt with Rome and Venice's relationship with the papacy, its relationships with other Mediterranean powers also mattered, and this may have been influential in the adoption or non-adoption of mosaic by other Italian city-states. As leaders of the Fourth Crusade, the Venetians revelled in their new status and looked to exalt their new prestige. After 1204, Venice, whose doge was ruler of a quarter and a half of a quarter of the empire and had a voice in the choice of the patriarch of Constantinople, saw itself as Byzantium's replacement, a new Rome and a new Constantinople rolled into one. There was even some talk in the Venetian Senate about moving lock, stock and barrel to Constantinople. But Constantinople was nevertheless methodically pillaged for home.[57] Byzantine plunder was used constructively to promote Venice as Byzantium's successor, and therefore as the heir to the Roman Empire.[58] Marble panels, columns and sculptures and even four bronze horses appeared on the façade of S. Marco, all shipped back from Constantinople. Mosaic tesserae may have been among this booty, though by the thirteenth century both glass and tesserae were being made in Venice for use in S. Marco. But the Byzantine recapture of Constantinople in 1261 meant that the Venetians, seeking to retain their place as the dominant sea and trading power in the Mediterranean, needed to renegotiate their position in relation to Byzantium, to other Italian cities, notably Genoa, and to the two religious powers, Rome and Islam.[59]

Trade and other relations with the Islamic world became increasingly important. I have already discussed how the growing and increasingly dominant Venetian glass industry of the thirteenth century depended on the import of plant ash from the Islamic Levant. Although the influences of Islamic art on portable objects, notably glass, metalwork and ceramics, has been recognised, it is conceivable that the mosaic art of the Islamic world was also referenced in the mosaics of S. Marco.[60] For example, those mosaics identified as thirteenth century use mother-of-pearl in a way that earlier mosaics in the church do not. Demus rather hesitantly suggested that this mother-of-pearl might have been plundered from Constantinople, though there is no surviving evidence of it being used in mosaics from the empire in the eleventh, twelfth or thirteenth centuries.[61] It was, however, used in the Church of the Nativity in Bethlehem and in twelfth- and thirteenth-century Islamic mosaics, and so may well have been yet another Levantine import.

By the thirteenth century, Venetian mosaicists were in demand elsewhere in Italy. The letter of Pope Honorius III to Doge Ziani shows them employed at S. Paolo *fuori le mura* in Rome. In the early fourteenth century, Venetian mosaicists were sought for work on the Florence Baptistery, to replace workmen sacked for stealing glass and tesserae.[62] A Venetian document of 1258 ordered mosaic workers to stay in the city and to train up to two apprentices. Although this has been read as indicating problems and a need to boost the craft, it may suggest the opposite: that demand was growing and the Venetians were as eager to hang on to their mosaicists as to their prestigious glassworkers.[63]

So in Venice, as in Italy, we might say 'mosaic business as usual'. The traditional 'mosaic cities' of Rome and Venice and their usual patrons continued to use the medium extensively (for mosaic) in the thirteenth century, in much the same ways and many of the same contexts as they had done for centuries. But there is also evidence to indicate a slightly more widespread use of the medium in several cities that were up and coming: at Florence and Genoa, this is the first surviving evidence for mosaics, though Salerno had previously employed the medium. Was the choice of mosaic perhaps a use of a medium perceived as 'venerable' and apostolic, as lending prestige to a monument and marking it out in some way? Perhaps too, it reflected a level of local rivalry, as I have suggested with Rome and Venice: if these city-states used it, then those who aspired to the same status needed to imitate and follow on.

THE BYZANTINE EMPIRE

What then of Byzantium in this same period? Part of a mosaic depicting an almost life-sized Archangel Michael in three-quarter view was found at the Kalenderhane Camii and dated to *c.* 1200, suggesting that business there might too have continued as normal– until 1204, when the Fourth Crusade, led by Philip of Swabia, Boniface of Montferrand and Doge Enrico Dandolo, sacked Constantinople and established the Latin Empire of Constantinople (1204–61).[64] The Latins claimed sovereignty over all former Byzantine territories, though in reality this was only effective in Bithynia, eastern Thrace and much of Greece. The Byzantines established three power bases. In the wealthy port of Trebizond, the Komnenoi, or, as they preferred to call themselves, the Grand Komnenoi, declared themselves emperors of a narrow strip of land along the south-east coast of the Black Sea, and survived as a last bastion of Byzantium until 1461, when Trebizond surrendered to the Turks. In Epiros, Michael Komnenos Doukas founded a state, known as a despotate, based in north-west Greece and Thessaly. The despots of Epiros briefly claimed imperial power between the 1220s and 1240s, establishing their capital at Thessaloniki. The despotate came to an end in 1318, when it was taken by the Italians, and the area finally fell to the Turks in the 1440s. Finally, Theodore Laskaris established the Empire of Nikaea, which held the rest of Asia Minor, sandwiched between the Latins and the Seljuks, and it was Michael VIII Palaeologos who, from Nikaea, recaptured Constantinople. This renewed Byzantine Empire, very much a leftover morsel, lasted from 1261 until Constantinople fell to the Turks in 1453, shrinking in size further and further. So, unsurprisingly, the thirteenth century was hardly a time of great prosperity in Byzantium, for either Latins or Byzantines.[65] The Sack of 1204 (and the war that preceded it) caused massive damage and destruction. The Latin court itself was impoverished, for the Byzantine court had fled and revenues were continually disrupted, whilst various claimants to Constantinople – Venetians, Pisans, Genoans – all seized the chance to divert imperial trade to

their cities. The Venetians, for example, chose not to revive the silk trade in conquered Constantinople, but to establish it in Venice.

No mosaics survive from Latin Constantinople. This may be because none was commissioned. The Sack was hugely destructive; the Latin occupation was a cue for enthusiastic looting and areas of the city became increasingly derelict. Indeed at one point the Byzantine Emperor in Nikaea, John III Vatatzes, gave the Latins money to renovate the Church of the Holy Apostles.[66] Nonetheless, the city was not a desert. Frescoes depicting St Francis were found in the church now known as the Kalenderhane Camii and have been dated to the 1250s. A mosaic icon of the Virgin in the same church must have been made there after the frescoes, but when is unknown.[67] Written accounts of the Latin church of St Francis in the Galata area of the city, which was demolished in the late seventeenth century, suggest that it may have had thirteenth-century mosaics. This church, presumably Franciscan, is said to have been domed and richly decorated with mosaics both inside and out.[68] The earliest record is from a will dated to 1297, in which a woman specified the church as her place of burial, indicating that it must have already been in existence. The church is unlikely to predate 1228, the date of the foundation of the basilica dedicated to Francis in Assisi immediately after the saint's canonisation. Tantalisingly uncertain are the questions of whether it was built *de novo* or was a reconstituted Eastern Orthodox Church, and whether its mosaics were made especially for it or were there already.

With the restoration of the Byzantine Empire, in contrast, refurbishments in the capital seem to have begun immediately. Michael VIII was credited as a great builder, though it was inevitable that all Greek sources would claim that the Latins left the city in ruins.[69] He seems to have been determined to restore Constantinople to its former glory, to such an extent that he was hailed as a 'New Constantine'.[70] His was largely a programme of rebuilding, from the city walls to Hagia Sophia, though perhaps twenty-eight new churches were built and another ten restored between 1261 and 1328.[71] Michael is said to have had paintings of his victories put into the Blachernae Palace, which might suggest, in comparison to earlier emperors, a shortage of cash and/or resources.[72] But he may also have been responsible for a mosaic panel of himself, his wife and son and another with the Tree of Jesse in the Peribleptos Church, the genealogy of Christ, stressing his descent from David via Mary, serving to underline the emperor's own ancestry. At the Church of Constantine Lips, the thirteenth-century south church served as a mausoleum for Michael's wife, Theodora Palaeologina's family, and traces of mosaic decoration survived on tombs in the inner ambulatory and the south-east and south-west arcosolia, including the remains of a standing figure with its hands folded over its breast.[73]

However, the mosaic most closely associated with Michael is the monumental Deesis panel, depicting Christ flanked by his Mother and John the Baptist, in Hagia Sophia (see Fig. 153). Located on the internal face of the wall marking out the south gallery, it was 5.2 metres high and just over 6 metres wide; the figures were originally 4 metres high. Although Thomas Whittemore, who uncovered it, believed the panel to be eleventh or twelfth century in date, it is now almost universally accepted as thirteenth or possibly fourteenth century.[74] Michael VIII is known to have carried out refurbishments in Hagia Sophia and this panel was perhaps a commission of 1261 celebrating the reconsecration of Hagia Sophia as an Orthodox Cathedral after the expulsion of the Latins, possibly put there between 25 July 1261 and Christmas Day of the same year.[75] If so, it would have been brisk work over a period of perhaps two months.

The lower part has been lost; Mary and John once stood about 30 cm below the present base

of the panel and traces of mosaic exist under the marble revetment.[76] It is conceivable that Christ was enthroned, emphasising his monumental size still further. As he blesses with his right hand and holds a closed book in his left, whilst the Mother of God and the Baptist incline their heads and extend their hands in supplication, the image was perhaps one of intercession for mankind, though there may once have been a donor figure: there is certainly room for one. The figures stand against a very striking and unusual background of gold laid in a raised trefoil pattern, something seen in earlier floor mosaics and also in the wall mosaic of the Orant Mother of God from Livadia on Cyprus, conventionally dated to the sixth century. The panel has been repaired at some point in its history: traces of beeswax (presumably used as a setting bed) survive.

Although mosaic techniques such as chequerboarding (along the Mother of God's jaw-line, for example) make this very much a piece of mosaic work, the faces are nevertheless softly modelled in such small tesserae that the effect is, in a way, closer to painting than to mosaic (and which, returning to a point made in Chapter 2, would have been so much easier to produce in a workshop than on the wall). Some areas, such as the shoulder of Christ, the lips of Mary and the beard of the Baptist, are indeed painted rather than set with mosaic (though this is a device used in other mosaics, such as the tenth-century Alexander panel in Hagia Sophia). The appearance of the mosaic overall has been seen as reminiscent of the 'early Renaissance'.[77] Mischievously, one might suggest that as the bulk of mosaic-making in the thirteenth century was Italian and that as Hagia Sophia was a Latin church of worship for some fifty years, it is possible that the mosaic was the work of a Western artist during the period of the Latin Empire. Whether a major work by a hated Latin would have survived in Hagia Sophia after the restoration of the empire is another matter, however. But perhaps Michael hired Italian mosaicists, for there is some evidence suggesting his employment of Italian artists in other media. He supposedly placed bronze statues of himself and the Archangel Michael in front of the Church of the Holy Apostles: since the last-documented bronze statue made in the empire appears to have been seventh century, were Michael's sculptors Italian?[78] And if Italians were used for sculptures, then why not for mosaics? Certainly the glass used in the Deesis panel is as likely to have come from Italy – Venice – as anywhere else.[79]

More widely, outside Constantinople imperial policy and propaganda can be traced through art in north-western and southern Greece, both recaptured by Michael from the Latins.[80] Whilst the empire was in exile in Nikaea, Epiros and Trebizond, it appears that mosaics were commissioned in all three of these centres, as if to make a point about their imperial standing. There were mosaics in the thirteenth-century palace of the Grand Komnenoi in Trebizond and their central church of the Chrysokephalos was decorated in mosaic, though the date for this remains contested.[81] In the Empire of Nikaea, the remains of a small church with mosaic decoration survive from thirteenth-century Sardis, implying that the medium continued to be employed, though more mosaic-work survives from post-1261.[82] In the Despotate of Epiros, which continued to exist as an independent Byzantine state, finally coming under imperial rule in the 1330s, two examples, commissioned by two brothers, survive, at Arta and at Pyli.

The history of these relates to family events in the region. On the death of Michael II Komnenos Doukas (despot *c.* 1230–66/68), Epiros was split into two parts. One of his sons, the legitimate Nikephoros Komnenos Doukas (1267/68–96), got Epiros and Aitoloakarnania, the greater and wealthier part; the other, the illegitimate John I Angelos Komnenos Doukas, got Thessaly.[83]

Arta was the patronage of Nikephoros (and of his wife, Anna Palaeologina, and their son



Figure 159 The mosaics of the Church of the Paregoretissa, Arta, thirteenth century: the central Pantokrator and below him cherubim, seraphim and prophets. Note the columns seemingly balanced in mid-air.

Thomas); Pyli, John's. Nikephoros's work on the Church of the Panagia Paregoretissa, dedicated to the Annunciation, dates to *c.* 1290, just as Nicholas IV was beginning to plan the Lateran and S. Maria Maggiore.[84] It is a very distinctive church. Externally, it looks like a massive striped cube. Internally, it is a centrally planned church with an octagonal central space, a main apse and two side apses, and then two side chapels each with a door into the nave, and a narthex. The church has five domes, of which the central dome has twelve segments. The system for supporting this dome is very unusual for the tiers of columns appear suspended in mid-air. There were marble revetments up to the level of the galleries, and mosaics survive in the dome, and in the east and south vaults of the roof.[85] Here Christ Pantokrator in the 'tunnel vault' of the dome blesses with one hand and holds a closed Gospel in the other. He is at a greater scale than any of the other figures: his head measures 2.22 metres and the mosaic roundel in which he is located has a diameter of 4.53 metres. The tympanum of the dome and the lunettes depict twelve prophets, including the Old Testament kings David and Solomon, alternating with cherubim and seraphim and wheels of fire (Fig. 159). Four evangelists sit in the pendentives of the dome. Gold and silver tesserae are used in some quantity, as is local stone for flesh areas in particular. It is not known how the rest of the church was decorated, though there may well have been more mosaic in the east and south. Stone sculptures, biblical reliefs, a scene of the Nativity, and monsters, all strongly reminiscent of Western Romanesque art, also adorn the interior. Where the mosaicists and the materials came from is not known, but there is no other evidence of mosaics in either Arta or Epiros more widely to suggest local industry. It is possible that they came from Constantinople, or from Thessaloniki; in light of the Western elements visible elsewhere in the decoration of the building, and the strong Italian presence in Arta and Epiros, it is also conceivable that they were Italian.

John's church was less spectacular and less costly. In 1283, he built Porta Panagia just outside the village of Pyli in Thessaly.[86] This is located on a strategic pass in the mountains between Epiros and Thessaly, and is dedicated to the Invincible Mother of God of the Great Gates. It has the form of a cross-vaulted three-aisled basilica with an exonarthex to the west, which is believed to have been added no later than the mid-fourteenth century.[87] The only mosaics that seem ever to have been in the church take the form of full-length figures of Christ and Mary holding the Christ-Child on the two piers flanking the sanctuary screen.[88] The mosaics are both surrounded by elaborate marble frames, turning them into monumental

icons. Usually, Christ would be shown on the right and the Virgin on the left of the templon screen, but here, and indeed the same is true at the Chora in Constantinople, dating to 1321, their positions are reversed. The church also contains wall paintings: whether the same workshop executed both the frescoes and the mosaics is possible but in doubt.[89] What is striking about the mosaics, however, is not their iconography, which is pretty standard, but that there is nothing to suggest that gold glass mosaic tesserae were used in the haloes and background: cubes of sandstone in a yellowish colour were used instead. Why this was so is unknown. It may reflect economies of cost, or a shortage of materials; it may be that glass was once there and has subsequently been removed. The scale of the mosaics suggests that John, on the eastern side of Greece and also inland, had less access to the materials needed than Nikephoros, on the western coast. Whether this relates in any way to Arta's links to Italy is another matter.

Rulers founded and decorated churches for different reasons. Arta was an important and flourishing trade centre, with close links to Italy and the capital of the Despotate of Epiros. As despot, Nikephoros clearly had the resources to found churches, as well as, in all probability, other buildings. The Paregoretissa is a large and lavish building that looked to both East and West and in many ways represented a claim to status on the part of the despot: this is a suitable building for a ruler. That John's church was smaller and less lavish may reflect its position as a foundation outside his capital city, but it is located on an important mountain pass on the border between himself and his brother. Interestingly, it shares a plan with his father's church of the Kato Panagia in Arta. The use of mosaic here for two very large images may be less than that of the Paregoretissa, but for a small, rural church it was still a significant statement of intent. What we do not know is how much additional mosaic was used in Epiros and whether or not we should understand the brothers deliberately using it as a distinctive and even unique medium or whether they followed in already established practice, as at Thessaloniki. Certainly, no other surviving Epirot churches contain mosaic; equally, none is on such an impressive architectural scale. Perhaps the point was just that Byzantine rulers used mosaic.

MAMLUK MOSAICS

One final area of mosaic-making in the thirteenth-century Mediterranean is unexpected in light of what has been considered up to this point. For a relatively short period, perhaps as much as a century between *c.* 1250 and *c.* 1350, mosaic as a medium was adopted by the Mamluk rulers of Egypt for use in a very specific and fairly limited way in mausolea and on mihrab hoods.

Thirteenth- and fourteenth-century Mamluk mosaics come at a time of violent internal and external conflict in the Muslim world.[90] Like the mosaics of Norman Sicily, they are a definable and short-lived phenomenon. The Mamluks, who seized power from the Ayyubids, were the leading power in Muslim Egypt between 1250 and 1517. They were slave-soldiers, manumitted and converted to Islam. Many were Qipchak Turks from Central Asia; others were from southern Russia or the Caucasus. As such, paradoxically they had more in common with the Mongols, against whom they fought for much of the thirteenth and fourteenth centuries, than with the peoples of Syria and Egypt amongst whom they lived. As slave-soldiers, the Mamluks formed a distinct entity in Islamic society, maintained for their fighting powers by the Ayyubid sultans and their nobility. When they took control for

themselves, they ruled as a stratum of society on top of the native population, stressing their superiority and exclusivity.[91]

By the late 1240s, the Mongols on the eastern steppes were attacking western Chinese tribes and advancing into southern Russia, pushing other peoples west. In 1244, and with the tacit support of the Ayyubids in Cairo, Jerusalem fell to a wandering band of Khwarezmians, an eastern Persian group who were themselves fleeing the Mongols. One of their first acts was to destroy the tombs of the Latin kings of Jerusalem. In response, Louis IX of France (St Louis as he became; ruler 1226–70) called a crusade (the seventh) though neither the papacy nor any other major Christian monarch was stirred to action. Rather than directly attacking the Holy Land, Louis assaulted Egypt. He took Damietta in the Nile delta in June 1249 and started to march on Cairo in November. At this point, the last Ayyubid sultan, al-Salih, died. Despite the ensuing chaos in Cairo during which the sultan's widow, Shajarat al-Durr, took control with Mamluk support, Louis and the Templars were roundly defeated by the Mamluk commander Baybars (1223–77) at al-Mansourah. Louis was captured and ransomed in return for Damietta and 400,000 livres. Shajarat was compelled to marry the Mamluk commander Aybeg in 1250, who became the first, though not uncontested, Mamluk sultan. He was later murdered on his wife's orders and a series of political murders followed including that of Shajarat herself, until Qutuz, the vice-regent, brought the factions bloodily under his control, seizing power for himself in 1259.

Whilst this was going on in Egypt, by 1259 most of the Levant had been overrun by the Mongols, led by Hulegu, grandson of Genghis Khan and the brother of Kublai. Baghdad, Aleppo and Damascus were all captured, Anatolia was overrun, and the Mamluk general Baybars, victor at al-Mansourah, was forced to flee to join Qutuz in Cairo. Only Egypt and a few isolated cities in Syria and the Arabian peninsula remained to Islam. At this point the Mongol Great Khan died, and Hulegu was compelled to return to the East to support his family's claim to power. The remaining Mongol army in Syria met the Mamluks in 1260 at Ayn Jalut and later the same year at Homs. Both battles were resounding Mamluk triumphs. However, once the Mamluks returned to Cairo, Baybars murdered Qutuz and seized the sultanate himself, an event that set the pattern of succession in the Mamluk Empire, where the average reign of the sultans was seven years.

Baybars cleared Syria of Mongols and began consolidating Mamluk Egyptian power there: the protection of Syria was central to the Mamluk claim to be the defenders of Islam. As well as holding the Mongols at bay, in the 1260s and 70s Baybars and Qalawun, his general, and later sultan in turn, destroyed the Christian lands of Outremer. When Tripoli and Acre (in 1291) were finally taken by Sultan Qalawun, this removed the last Christian footholds in the Holy Land. Nevertheless, Baybars maintained friendly relations with Norman Sicily, opened up trade with the Spanish kingdom of Aragon and stayed on good terms with the Italian maritime states.[92] To keep the Mongols at bay, he looked to make an alliance with the Golden Horde, the Mongol khanate of Russia, with which Hulegu's ilkhanate was involved in a protracted struggle. Baybars also sent raiding parties into Mongol areas of Armenia, the southern Taurus Mountains and the Seljuk sultanate of Rūm. This brought the Byzantine Empire into the equation: fear of a simultaneous Mamluk and Golden Horde attack on the ilkhanate led the Mongols to treat with Constantinople, perhaps fearing that Byzantium, too, might engage with the Golden Horde or the Mamluks if the Mongols attacked Greek possessions.

It is against this background that we need to understand Mamluk mosaics. Mamluk successes had shifted power away from Syria and Damascus to Cairo, the dominant city of the Mamluk world. Cairo needed the buildings that would mark out its status; many of the Mamluk sultans were responsible for some remarkable buildings, including Sultan Qalawun's mausoleum complex in Cairo, which contained a mosque, a religious school and a hospital. The mosaics were a part of this emphasis on art and architecture. At least seventeen buildings were adorned with mosaics: eight in Cairo, three in Damascus, three in Jerusalem, one in Hebron and one in Tripoli in the Lebanon.[93] Almost all of the known mosaics are small-scale ones, from mihrab hoods, the mihrab being the focal point of the mosque.[94] In other words, mosaic, the traditional medium of the Umayyad caliphs, was employed but, unlike in the Umayyad mosques, solely in the most important area of the mosque. The earliest surviving example in Cairo is the mihrab hood in the mausoleum of that Shajarat al-Durr (built in 1250) mentioned earlier, the wife of both the last Ayyubid and then first Mamluk rulers of Egypt.[95] This mosaic has a gold background on which are depicted the curling leaves and tendrils of a plant and fruits made from pearls: resonances with the Dome of the Rock are apparent but the design is highly apposite, for Shajarat's name means 'tree of pearls'.

After Sharajat, several other examples of mosaic are associated specifically with Baybars. Whilst governor of Syria, he commissioned a series of restorations of Umayyad mosaics, including the interior and exterior of the Dome of the Rock in Jerusalem and the Qubbat al-Silsila, the pillared cupola to the east of the Dome of the Rock, as well as the Great Mosque in Damascus in 1269. Baybars also commissioned new mosaics, notably in the decorative programme of his new palace in Damascus, dating to 1266. Baybars' own mausoleum, the Qubba al-Zahiriyya in Damascus, was also decorated with mosaics, though it was built by his son and probably decorated both by his son (who is also buried there) and by his son's successor, Qalawun (1279–90). In the mausoleum, the mosaic, on a gold background, runs around all four interior walls and includes mother-of-pearl (Fig. 160). The images are a mixture of architectural forms and trees, plants, vegetal scrolls, vases and cornucopia, seemingly variations on Umayyad themes seen in the Great Mosque adapted to Mamluk tastes.[96] Between 1294 and 1296, further repairs were carried out on the Umayyad mosaics of the Dome of the Rock in Jerusalem. These Qalawunid mosaics also used trees and architectural features and much gold and green, as well as mother-of-pearl. Qalawun and his successors were responsible for a further set of mosaics in Cairo. These range from his throne hall to the mihrab hood of Qalawun's madrasa adjoining his tomb in Cairo (dated to 1285). Although all of this suggests the use of mosaic as a royal medium, at much the same time, in Tripoli (Syria), the mosque of 'Isa ibn Umar al-Burtasi (nothing is known of who he was), founded between 1290 and 1324, used mosaic in the mihrab hood.

Mosaic may have had an even wider use in the Muslim world. The Artuqid palace in Diyarbakır had glass mosaics and inlaid marble, perhaps under Syrian influences, and a palace in Beirut appears to have been mosaicked.[97] This may also hint at a more widespread workforce and a broader perception of the medium: there may have been a feeling in the Islamic world – as I have suggested with mosaics in the Christian West – that it was an appropriate medium to use in the most important areas of a sacred building.

The story of Mamluk mosaics continues into the fourteenth century, but I will complete it here because I think what we see here is a short-lived appropriation of a classical early Muslim medium by a specific group of Mamluk rulers, after which



Figure 160 Mosaics from the Mausoleum of Baybars, Damascus, thirteenth century: trees, architecture and mother-of-pearl, evocative of the nearby Great Mosque.

mosaic appears to more or less vanish from the Islamic world. The period 1310–41 was one of peace and prosperity in Egypt. Crusader and Mongol threats had been dealt with and Egypt and Italy, especially Venice, had close and profitable trade links. It is in this context that the tradition of mosaic-making continued into the reigns and interregna of Sultan al-Nasir Muhammad ibn Qalawun (1293–94, 1299–1309, 1310–41). New glass mosaic was used in, for example, a palace in the citadel of Cairo, and the spandrels around the mihrab of the Taybarsiyya Madrasa in the al-Azhar Mosque in Cairo, where mother-of-pearl and red, green and yellow tesserae were used, but no gold.[98] Mosaic was used in two further mihrab hoods in Cairo, including the Mosque of Sitt Hadaq, the former (slave) nursemaid to the sultan (built 1339–40).[99] Here, the hood contained (the mosaic is damaged) a vase in mosaic, from which came a curving floral plant, enclosing at the top a mother-of-pearl rosette pendant. Other such pendants and drops hang from the branches. The frame, spandrels and arch of the mihrab are also decorated with marble, turquoise and mother-of-pearl, creating a stunning visual ensemble at the focal point of the mosque. This hood is echoed in the other surviving mosaic of the period in Cairo, the better-preserved mihrab hood in the madrasa of Emir Aqbugha, also dated to 1339. Mosaic was also recorded in the sultan's palace of Qasr al-Ablaq in Cairo (1313–15), where stained glass, mother-of-pearl, lapis lazuli and marble paving were also used. Although both Hadaq and Aqbugha held prominent positions at the court of Sultan Nasir Muhammad, administering his harem (Hadaq) and his household (Aqbugha), and although it is likely that both the mosque and the madrasa were the work of Nasir Muhammad's court architect, this does not explain the use of mosaic.

In Damascus, in the early fourteenth century, the governor of Syria, Tankiz al-Nasiri/al-Husami (1314–40) used mosaic in his Congregational Mosque on the qibla wall and in his mausoleum, again using mother-of-pearl and gold. Tankiz carried out considerable restorations of the Great Mosque in Damascus too, including the mosaics, and of the Dome of the Rock which may have included the mosaics, and in his own palace in Damascus. In Jerusalem, mosaic was used in Tankiz's madrasa

(1328–29), and in the mihrab in the haram at Hebron (1331–32), and at Homs. As governor of Syria, Tankiz oversaw an extensive programme of urban regeneration, building and rebuilding mosques, madrasas, baths, markets and other city buildings across the region from Damascus and Jerusalem to Hebron and Tripoli. It has been argued that it was as a result of his restorations of the early Umayyad monuments in Syria that Tankiz was inspired to use mosaic in his own buildings, and that this in turn inspired some of the impetus for mosaic in Cairo since Tankiz was a loyal servant of Sultan Nasir Muhammad.[100] However, the tradition of mosaicked mihrab hoods there, from the time of Shajarat on, indicates that the concept already existed; possibly the influence was the other way around. It has been proposed that, in restoring the marble panels of the mihrabs of the Dome of the Rock and the al-Aqsa, Tankiz used an art form, marble wall panelling, that was rare in Jerusalem, but common in Cairo, and this makes it clear that workmen could go from Cairo to Damascus as well as, potentially, the other way.[101]

The revival of mosaic under the Mamluks was fairly restricted and may have been nothing more than a tribute to the rarity and opulence of the medium in the Great Mosque, the Dome of the Rock and other major mosques of the Islamic world. But the use of mosaic may also have been part of a wider Mamluk acknowledgement from the time of Baybars on of the significance of the Great Mosque in Damascus and its evocation in a variety of ways in Mamluk art and architecture.[102] Just as the Mamluk mosaics make reference to Umayyad images, so too do the building forms themselves, which also derive from Umayyad mosques. Baybars' mausoleum is particularly close to its Umayyad predecessors. Indeed, until the discovery in 1985 of fragments of mosaic displaying architectural representations from the royal Mamluk Qa'a al-Ashrafiyya in the Citadel of Cairo, dated to 1292, it was thought that maybe the panels in Baybars' mausoleum were a one-off evocation of the Umayyad past. In fact it now seems less likely that the thirteenth- and fourteenth-century mosaics were unsuccessful imitations of the past and more probable that they were deliberately archaic displays. These were both part of a wider Mamluk interest in architectural representations and a deliberate choice and appropriation of Umayyad designs to make political and religious points, on a basic level, about the Mamluks' legitimacy in the context of an Umayyad heritage.[103] In the eleventh century, the mosaics of the Great Mosque seem to have been interpreted as showing the countries of the Islamic world and the wonders they contained. The mosaics in Baybars' mausoleum suggest that the potency of the architectural representations of the Great Mosque still carried force and may have displayed the pride that Baybars, Qalawun and al-Ashraf, all successful generals, felt in their conquests.[104] Further, Tankiz's fountain basin in his palace shows that Mamluk mosaicists could adopt the medium for particular Mamluk meanings and motifs. Clearly mosaic was used deliberately and should be understood in terms of what else was going on in Mamluk art in the period.

Huge numbers of Mamluk buildings survive but we know little about their architects and artists or about their positions in society. It seems likely that, as in the medieval Christian world, artists were not restricted to one craft but tended to possess a range of skills, perhaps associated with one basic art (metalwork or painting perhaps).[105] It is evident that there were interested patrons who desired mosaic and were able to find mosaicists to do that work. The story of mosaics in the Islamic world moves from the creations of the eighth and ninth centuries through periods of considerable repair to these revered mosques, notably the considerable

Fatimid repairs, especially in Jerusalem in the eleventh century, and the further repairs by Baybars and Tankiz in the thirteenth century, followed by this brief resurgence of mosaic work from scratch, but on a relatively small scale (rather like its use on tombs in thirteenth-century Rome) and focused especially on small areas in the form of mihrab hoods.[106] The Great Mosque was also repaired on several occasions in the fifteenth century, perhaps after Tamurlane's sack of the city in 1401; repairs were made in 1416 to the west and north porticoes and after a fire in 1479.

I have already discussed the question of Byzantine and/or local mosaicists in the decoration of the eighth-century mosques, in the eleventh century with Caliph al-Zahir's restorations of the Dome of the Rock (1022–23) and the al-Aqsa (1030s) in Jerusalem, and in the twelfth century with the Church of the Nativity in Bethlehem. There seems no good reason why a small local mosaic workshop, or even workshops, could not have continued to exist in the Levant and Egypt. There is a continuing story of restorations to the great mosques, and it seems reasonable to suppose that there were always craftsmen in the Islamic world with the skill to repair mosaics, and, potentially, to make from new, especially if only relatively small patches of work were needed.[107] It has been proposed that Baybars sponsored an atelier, perhaps of craftsmen from Damascus, to restore the Great Mosque and the Dome of the Rock, and that Qalawun may have brought these Syrian workmen to Cairo to work for him. Neither is an unreasonable suggestion. Once established, workshops may have lasted for a while until demand dwindled and the artists moved on.

Muslim sources record tesserae being collected from the Umayyad mosaics when they fell out, and then reused, and it has also been suggested that the small scale of thirteenth-century mosaics – confined to mihrab hoods – indicates a shortage of resources. This would be puzzling in light of what is known about glass production (primary and secondary) in the Islamic world between the eighth and fourteenth centuries, when Islamic glass became increasingly common and sought-after. There seems no technological reason why Islamic glassworkers could not have produced tesserae. Al-Umari, writing in *c.* 1340, said that new tesserae were being made for the Great Mosque in his time and that tesserae from the same stock had been used in Tankiz's mosque built in 1317, which he had witnessed. He also explained how to tell the difference between old and new mosaic (the shape of the tesserae).[108] And, certainly in the thirteenth century, if there was a problem, there seems no reason why the Mamluks could not have imported glass and/or tesserae from Venice, as they did with other goods. That reuse was perhaps common may be a reflection less of a shortage of material and more of good sense, making use of what was to hand; the small scale of these mosaics was surely a matter of choice.

CONCLUSIONS

The upsurge in the use of mosaic across Italy in the thirteenth century, continuing into the fourteenth century, is intriguing. How much this was a result of the increased wealth of city-states in Italy, how far it was a response to the prestigious traditions of mosaic-making in other great cities such as Rome and Venice, and how dependent its use was on the Sack of Constantinople in 1204 is impossible to say. It is likely that a combination of local and international factors, of which increasing prosperity and civic pride must have been amongst the most dominant, led to its popularity among the different patrons, who ranged from popes

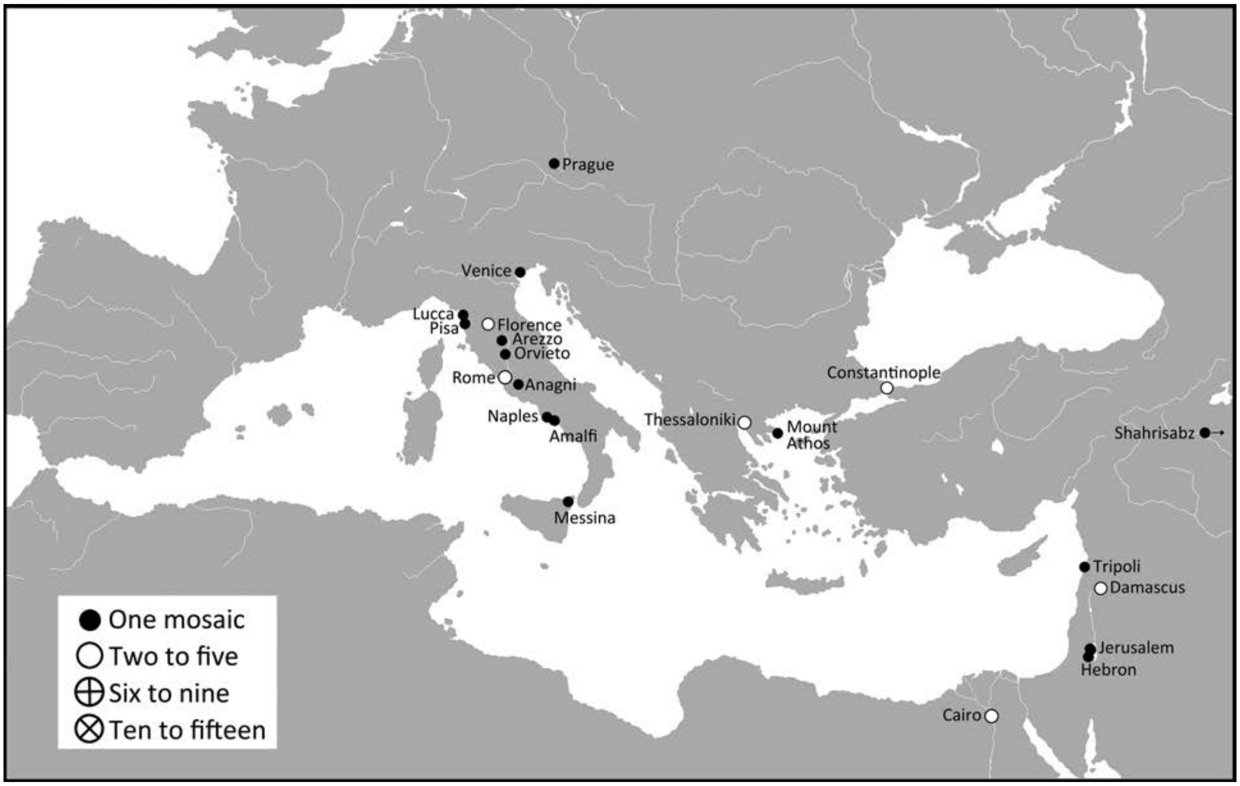
to city *Commune* and guilds. The thirteenth century was also a period in Italy when names of patrons and particularly artists become ever more associated with mosaic. In Byzantium, the use of mosaic in the fragmented remains of the empire after 1204 and then once more in Constantinople after the reconquest of 1261 was perhaps a statement of the medium as an imperial Byzantine and, perhaps to a lesser extent, Orthodox one. In Mamluk Cairo and the Levant, mosaic brought with it associations with Umayyad and Fatimid predecessors. In all three cases, the significance of the medium surely carried weight in its harking back to great pasts and heritages, as well as to present reputation and esteem, leading to the choice of mosaic ahead of paint, stucco or sculpture. But Pope Nicholas' use of fresco at Assisi and the mingling of mosaic with other media, above all sculpture, on the façades of Italian churches now, retrospectively, can be seen as a sign of what was to come, a hint that mosaic's prestige would not last for ever.

Chapter 13

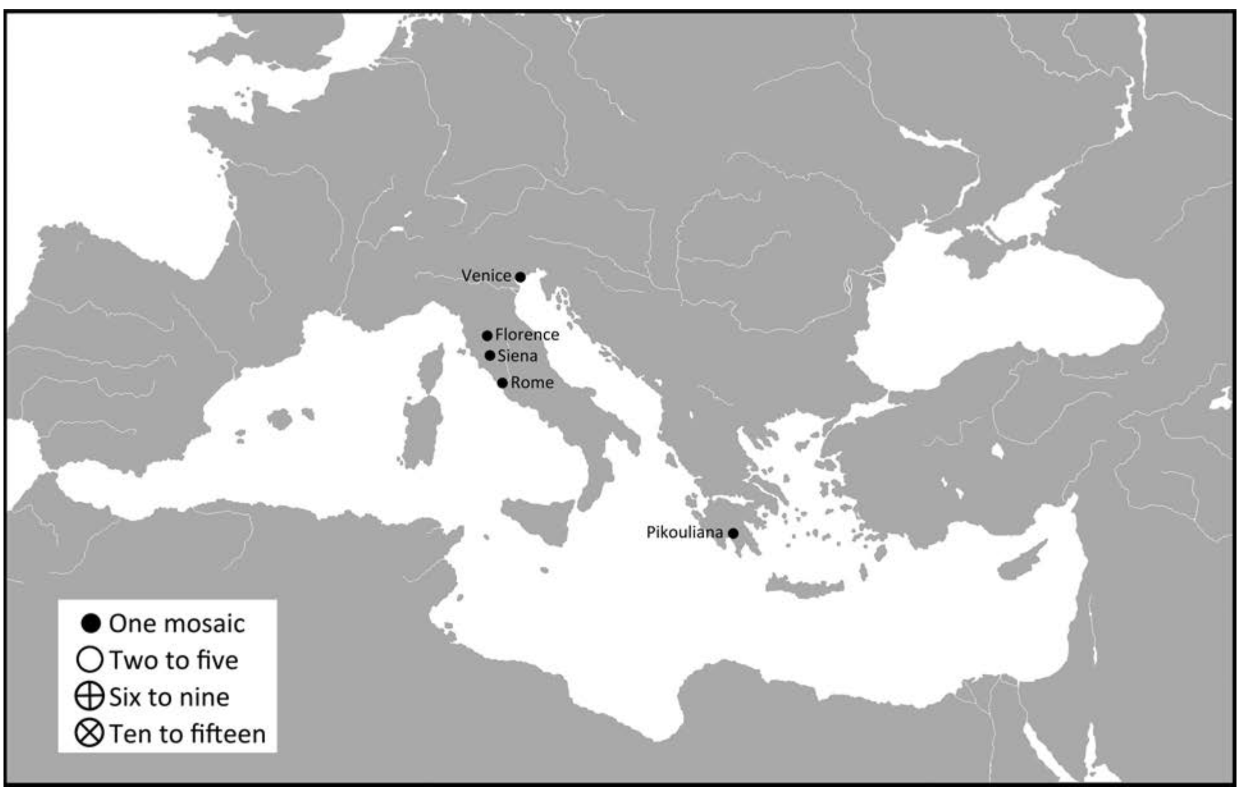
BOOM AND BUST: THE FOURTEENTH AND FIFTEENTH CENTURIES

The contrast between the numbers of mosaics surviving from the thirteenth, fourteenth and fifteenth centuries is striking. Forty-six new mosaics are recorded on the map of thirteenth-century mosaics, twenty-five in Italy: it was a growth industry, the medium used widely across the region, and by some city-states seemingly for the first time. The total falls slightly in the fourteenth century to thirty-one, with thirteen in Italy, seven in the Byzantine Empire and ten in the Mamluk world (these last were discussed in the previous chapter).[1] But the bottom drops out of the mosaic market dramatically in the fifteenth century, when only four new mosaics are recorded and written sources add nothing to the record.

The pattern of distribution of mosaics on the map of the fourteenth century is not so very different in spread from that of the thirteenth. Italy dominates, but within the peninsula, although some old friends are present again (Rome, Venice, Florence) some names that have not appeared for some time reappear – Messina and Naples – and some new customers for the medium, such as Orvieto and Pisa, emerge. In the fifteenth century, there is one very small mosaic from the Morea, dated to 1429, but then the Byzantine Empire ceased to exist in 1453. There is none from the Islamic world, even after 1453. There are four Italian examples, but that small number, as against the thirteen of the previous century, implies a dramatic decrease there. What was going on? The reasons for this sudden and seemingly abrupt cessation in mosaic activity are unclear, but their consideration underpins this chapter.



Map 11 New wall mosaics in the fourteenth century.



Map 12 New wall mosaics in the fifteenth century.

ITALY

The trends of mosaic-making in thirteenth-century Italy seem to carry on into the next century almost without a check. Mosaics continued to be installed in sites where work had already begun. In S. Marco in Venice, for one, Doge Andrea Dandolo, a descendant of that Enrico Dandolo who had masterminded the Sack of Constantinople in 1204, oversaw their use in the full decoration of the Baptistery and the Cappella di S. Isidore in *c.* 1350. The Baptistery included narrative scenes of the apostles conducting baptisms across the world, as well as scenes of John the Baptist himself; the St Isidore Chapel is dominated by assorted scenes from that saint's life. Yet more Venetian myth-building was in progress, and indeed the creation of yet more parallels with Rome.[2] The 1340s and 1350s were a turbulent time for Venice, a period of plague and war, fighting their local rivals Genoa, and struggling for supremacy in the Mediterranean. To combat this, Doge Dandolo's sought to conjure up past glories for the city, including sponsoring the mosaics of the Baptistery and a revamping of the Pala d'Oro, the fabulous gold and jewelled altarpiece of the church, made from a mixture of tenth-, twelfth- and fourteenth-century enamels, some plundered from Constantinople after 1204.

Throughout the fifteenth and sixteenth centuries, and indeed down to the present, the mosaics in S. Marco in Venice continued to be treated with respect. Work on them, generally in the form of repairs, has never really ceased.[3] A great fire in 1419 meant that large-scale restorations were needed, though the original programme was retained and the old mosaics were used to inspire the new compositions and restorations, with new work placed alongside old.[4] Increasingly, perhaps from the fifteenth century onwards, the mosaicists of the church left a record of their identity. Paolo Uccello, for one, is known to have worked in the church between 1425 and 1430 (though the only figure known for certain as his is St Peter on the façade). Uccello appears to have been employed because of a shortage of local technically proficient mosaicists. Despite the evidence of the thirteenth century – Pope Honorius' request for Venetian mosaicists and the decree of 1258 ordering mosaic workers to stay in the city to train up apprentices – after the death of Jacobello della Chiesa in 1424/25, it seems that there was a dearth of mosaicists in Venice – the last had, supposedly, emigrated to Genoa – and help in mosaic-making had to be sought from Florence.[5] Later in the century, the mosaics of the Cappella della Madonna dei Mascoli were the work of the Venetian Michele Giambono (d. 1462), who was based on Murano, and when a new sacristy was built it was decorated with mosaics, probably by Piero di Zorzi and his son Vincenzo di Piero between 1495 and 1505.[6] The scenes here depict images of triumph and redemption: a bust-length Christ, blessing, is the centre-piece of the Latin cross spanning the vault. Below this *tondo*, three tiers of biblical figures are shown, including roundels with the evangelists and prophets, and full-length apostles. The Virgin and Christ-Child are depicted enthroned on the west wall, flanked by Theodore and George with Jerome beneath. In 1507, Crisogono Novello repaired mosaics in the Ascension dome of S. Marco. In 1542–51, the thirteenth-century Tree of Jesse was removed and replaced. However, a whole series of decrees (1566, 1610, 1613, 1617 and 1689) designed to protect the old mosaics highlight a problem with the restoration work, for these state that the changes of old were not made because the mosaics were decaying, but for the prestige of the artists and through the greed of the mosaicists.[7]

Mosaic in Venice had never been restricted to S. Marco, but there is more material from these later periods detailing its use. There may well have been mosaics (of what date is another

issue) in the churches of S. Giacomo di Rialto, S. Theodore, S. Zaccaria, S. Margarita and S. Nicolo di Lido. In 1502, Marcantonio Sabellico recorded 'gilded vaults', possibly mosaic, in various parish churches, including S. Trovaso, S. Margarita, S. Aponal and the cathedral of S. Pietro di Castelli, which had originally been a Byzantine-style basilica.[8] Although many Venetian churches that had mosaics were destroyed by the late fifteenth century, some fifteenth-century Venetian altarpieces make reference to mosaic by depicting the holy figures under a vault of gold mosaic.[9] The apse mosaic shown in the altarpiece of the Virgin and Child and assembled saints painted by Giovanni Bellini in 1487 for the dogal church of S. Giobbe, for example, shows seraphim set on a gold mosaic background. This perhaps created a sense of a fictive S. Marco for its viewers, but as plausibly it located the Virgin in another, more abstract and symbolic space through an evocative use of the medium of mosaic.[10] Whichever view is preferred, and they are not exclusive, the use of mosaic in the image surely indicates that the medium was something Venetian audiences recognised and appreciated. Later mosaics were installed in S. Salvador by Novello in 1523, and subsequently in S. Giorgio dei Greci.[11] In the sixteenth and seventeenth centuries there were mosaic competitions between Rome and Venice.[12] Furthermore, the Venetian glass industry continued to flourish and develop, and from the fifteenth century on, glass recipe books, which included information on making glass for mosaics, survive in increasing numbers.[13]

In Florence, as in Venice, in the fourteenth and fifteenth centuries, new mosaics were installed in an already-mosaicked building, the Baptistery. They included the evangelists on the central tribune and the popes, deacons and saints around the drum.[14] In fifteenth-century Florence, the façade of S. Miniato was repaired by Lippo di Corso; in the Cathedral Domenico Ghirlandaio was responsible for a scene of the Annunciation in an exterior lunette on the north façade of the cathedral, whilst his brother, Davide, installed an Annunciation mosaic on the façade of S. Annunziata in 1510.[15] Lorenzo de'Medici, Lorenzo the Magnificent (1449–92), not only sponsored painting through Botticelli and Michelangelo, but was, as Vasari noted, a supporter of mosaic.[16] Lorenzo collected miniature mosaics, owning at least eleven, and commissioned mosaics for the Chapel of S. Zenobius in the Cathedral, but died before these were really begun, bringing work to an end: only a mosaic portrait of the saint himself exists.

In the third centre of mosaic use, Rome, the fourteenth century was something of a low point in papal history. In 1300, the papacy was relatively stable and wealthy, run through a large bureaucracy, with considerable financial and political power; the Jubilee of that year almost certainly stimulated additional large-scale public commissions. But then, shortly after 1300, things came crashing down: as the great Roman families fought amongst themselves for ascendancy, relations with the French deteriorated, and finally the papacy, headed by a French pope, Clement V, moved to Avignon in 1309, where it stayed until 1377. With the pope went his court, his financiers, his cardinals and his artists. And, with the popes gone, Rome lost a major part of its reason for existence – and its most important patron of art. Many artists went to France, as did Rusuti, or elsewhere, as Cavallini to Naples.[17] It is this absence of papal patronage that may go a long way to explaining the lack of fourteenth-century mosaics in the city. The power vacuum was filled by conflicts between rival aristocratic families and the *Commune* of the city, and even when the popes returned, vicious infighting between rival candidates in Rome and at Avignon and then Pisa did little to improve matters. It was not until the fifteenth century that Pope Martin V (1417–31) began to re-establish a united papacy and find the



Figure 161 The *Navicella* (what's left of it), now in the centre of the portico, new St Peter's, Rome, originally by Giotto and fourteenth century but totally remade and remounted.

resources to begin to restore the city, opening the way for the lavish but mosaic-poor patronage of fifteenth- and early sixteenth-popes such as Sixtus IV and Julius II.

In Rome, only four major mosaic commissions are known from this entire period, two fourteenth century, one fifteenth and one sixteenth. The first is a rare example of papal patronage within Rome during the Avignon period: Pope John XXII made a donation from Avignon specifically for repairs to S. Paolo *fuori le mura*, and in 1325 Cavallini, back in the city, was employed to work on the mosaic façade, which depicted Christ, angels, Peter and Paul, a Deesis and the donor. In the same century, Cardinal Giacomo Stefaneschi, brother of the Bertoldo Stefaneschi of Cavallini's mosaics in S. Maria in Trastevere, appears to have commissioned Giotto to make a mosaic, the so-called *Navicella* in St Peter's, a scene of Christ walking on water to a boat containing the storm-tossed apostles. This large scene (perhaps 9.4 × 13.5 metres) was located above the entrance arcade of St Peter's, facing the main façade across the courtyard.[18] In the seventeenth century, the mosaic was reinstalled (after a fashion) in the new church, where the sad, debased remains (Fig. 161) can still be seen, ravaged and unrecognisable, inside and above the centre of the portico. Two detached and reset angels' heads may also have come from it.[19]

Stefaneschi's patronage is recorded in an obituary notice dated to 1343 recording three of his other major donations to St Peter's: a large (as displayed now, 220 × 245 cm, but originally larger) altarpiece valued at 500 florins; a mosaic of Christ saving St Peter (identified with the *Navicella*), valued at 2,200 florins; and the paintings in the tribuna of the church, valued at 5,000 florins.[20] The installation of a new mosaic at St Peter's is relatively unproblematic: it was an act in the on-going tradition of papal improvements and use of mosaic in the church, and in its design it gave the message that the pope had care for his city. It seems probable that the ship was meant to represent the Roman Church, the safe haven for all Christians, captained by St Peter and his deputy, the pope (and also his deputy, Cardinal Stefaneschi, who paid for it). But both patron

and artist present interwoven problems, the sorts of problems that arise when names start being bandied about. Despite the designation of the patron as Stefaneschi, it is not known when the *Navicella* was made. It may have been produced for the Jubilee of 1300 or it may have been later, dating to the time of the 'Avignon papacy', when Clement V was in France and Stefaneschi had charge of Rome.[21] If the mosaic was installed in 1300, then Stefaneschi was only thirty and scholars have questioned whether he was important and senior enough to have commissioned art for St Peter's under the nose of Pope Boniface. If the mosaic belongs to the Avignon period, then at what point? The answer here in part seems to depend on where the mosaic is believed to fit into Giotto's oeuvre, 1310 being a popular suggestion. A complicating factor is that it has been suggested that the obituary notice on which Giotto's authorship depends both inflated the costs of Stefaneschi's three commissions and added in the name of Giotto in order to enhance the cardinal's patronage and importance.[22] Another snag is that, because Giotto is traditionally defined as a painter not a mosaicist, his role in making the mosaic has been perceived as problematic and its place in his work debated, in terms of both when he made it and what it was that he made. At best, he has tended to be viewed as the designer of the mosaic, rather than its executioner: apparently 'few today' would argue that Giotto put up the *Navicella* himself.[23]

But why there should be such a reluctance to see Giotto as a mosaicist is odd. Mosaic-making in the early fourteenth century was still a prestigious and costly art form, especially in Rome, and one undertaken by a range of artists from Lellio da Orvieto (or da Roma – the inscription recording his work in Naples cathedral is fragmentary) to Cavallini and Cimabue. Furthermore, working in both fresco and mosaic was not unusual, witness Torriti, Rusuti, Cavallini and Cimabue and, in the fifteenth century, Alesso Baldovinetti and both Domenico and Davide Ghirlandaio. If Giotto really did train under Cimabue, as Vasari claimed, then in fact he was apprenticed in a workshop that dealt in mosaic, for Cimabue worked in mosaic at Pisa Cathedral. And although no other mosaics by Giotto are known, that is hardly surprising since there is no complete knowledge of any artists' oeuvre in the late Middle Ages. Intriguingly in this context, the fifteenth-century funerary monument to Giotto inside Florence Cathedral shows him as a mosaicist, sticking tesserae into a panel, an image of artistic practice that cannot have been meaningless to its original audience.[24] As to whether Giotto 'put it up' himself, that is a question that can be asked of any mosaic designer, from the anonymous ones of the fourth century to Torriti and Cavallini in the thirteenth century. There is no reason that he should not have been on the scaffold, as Fra Leonardelli at Orvieto is known to have been. What does seem unlikely, however, is that Giotto produced a cartoon for someone else to use in making the mosaic. The earliest recorded use of cartoons is by Orcagna in 1345, using them for repeated ornamental designs, and the earliest figural examples surviving are from the 1430s.[25]

In addition to the *Navicella*, otherwise in Rome a further surviving new mosaic of the fourteenth century is the roundel depicting the Virgin and Child over the south door at the Aracoeli. In S. Croce in Gerusalemme, one of the great original Early Christian basilicas, Melozzo da Forli (*c.* 1438–*c.* 1494) is associated with the wall and ceiling mosaics. But after that, there were no new mosaics, with the one shining – and later – exception of the Chigi Chapel of S. Maria del Popolo, where the mosaics were designed by Raphael but set by the Venetian Luigi da Pace in 1516. The story of mosaics in Rome after this date contrasts with that of S. Marco, being one predominantly of destruction and replacement rather than restoration and repair, as churches

were rebuilt and modernised. St Peter's itself was destroyed in the sixteenth century and its mosaics with it. The seventeenth and eighteenth centuries were particularly bad times as church after church was given a Baroque face-lift, which often involved the removal of the old and unfashionable: SS. Cosmas and Damian had its floor raised by 7 metres; S. Croce lost any Early Christian semblance; S. Clemente was rebuilt by Clement IX (1600–69). The apse of the Lateran was replaced in the nineteenth century and S. Paolo *fuori le mura* was destroyed by fire in 1823 and rebuilt in imitation of the old. A handful of new mosaics have been installed in Rome since the sixteenth century, mainly in the nineteenth and twentieth centuries, but that account lies outside this book.

Elsewhere in Italy in the fourteenth century mosaic-making continued or was revived in several cities. In Messina, the Cathedral of S. Maria Assunta was decorated with mosaic in the apse, showing Christ, Virgin and St Placido respectively enthroned with angels, saints and donors, Emperor Frederick III of Aragon and Peter II of Sicily. There was a mosaic of the Virgin and Child with archangels and two queens, Eleanor of Anjou (1303–37) and Elizabeth of Carinthia (1323–52), together with Saints Agatha and Lucy in the apse of the Chapel of the Sacrament, with the Lamb of God in the vault; and in the apse of the chapel of S. Placido, John the Evangelist was pictured, flanked by bishops. There are also four detached mosaic fragments dated to the thirteenth or fourteenth century in the regional Museum in Messina, whose contexts are unknown but whose existence reveals more mosaic activity in Messina in this period.[26] In Naples (where mosaics were last recorded in the sixth century), in 1322 the apse in the chapel of the Madonna del Principio in the Cathedral basilica of S. Restituta was given a mosaic showing the Virgin enthroned with Christ, flanked by St Januarius and St Restituta by Lellio da Orvieto, who was also responsible for frescoes of the Tree of Jesse in the Chapel of S. Paolo.[27] The chapel itself was revered as the spot where St Peter had consecrated the first bishop of Naples, and the site, medium, artist and topic of the mosaic all indicate a desire on the part of the patron, Robert of Anjou, king of Naples between 1309 and 1343, to allude to his unity with Rome. It is also possible that there was a mosaic in the apse of the cathedral of S. Martino in Lucca, an image of an enthroned Christ with the four rivers of paradise flowing from his throne, which is usually dated to 1308 or 1314, and signed by Deodata Orlandi.[28]

And a handful of towns took up the medium for the first time (that we know of). In Pisa, between 1301 and 1321, the apse of the Cathedral Church of S. Maria Assunta was adorned with a mosaic of Christ in Majesty, flanked by the Virgin and John the Evangelist. It was the work of Francesca da Pisa, assisted by, among others, Cimabue, and was finished by Vincino da Pistoia in 1302. Later (1330–50), a Transfiguration was installed in the south transept, and (1400–50) in the north an Annunciation. Fifteenth-century mosaics were also placed on the façade by Baldovinetti (1425–99). Additionally, Ghirlandaio's workshop was responsible for repairs to the apse mosaic in Pisa, for the mosaics in Pistoia between 1492 and 1494 and for repairs to the façade of Siena Cathedral. In Pisa, the mosaics begun in the fourteenth century were completed by three small mosaics on the west façade, almost hidden in the sculpture, and another – simply two bands of decorative mosaic – on the south side of the south transept. From Pisa also comes evidence that spare tesserae were sold to Florence.[29] At Orvieto, the façade mosaics, to which I have so often referred in terms of the artists and their materials, were installed throughout the fourteenth century (1350s through to the 1390s), a series of panels dealing with events in the life of the Virgin and occupying an area of about

121 square metres, and handled by a considerable number of artists.[30] The façade of the Cathedral as a whole involved a mixture of relief sculpture, mosaic and bronzes, a combination similar to that of S. Marco. In the next century, Davide Ghirlandaio repaired the mosaics. On a much smaller scale, reminiscent of the use of the medium on tombs in the previous century, at Agnani, perhaps 60 km south of Rome, a memorial to Pope Boniface VIII (d. 1303) is located above the main door of the building on the exterior. It takes the form of a hefty stone statue of the pope, but above his head the coat of arms is worked in mosaic.

Façade mosaics were increasingly popular in Italy in the thirteenth century (St Peter's, the Lateran, S. Paolo *fuori le mura*, S. Maria in Aracoeli, S. Maria Maggiore, S. Maria in Trastevere, S. Francesca Romana, even S. Tommaso, in Rome, for example; S. Marco in Venice), and this trend continued into the fourteenth.[31] New mosaic façades include those of the cathedrals of Pisa, Messina, Florence, Lucca, Siena and Orvieto. Some of these were installed in places with a tradition of mosaic-making; at others, such as Pisa and Orvieto, this is the first existing mention of mosaic from these towns and cities. In many cases, these churches had mosaics both inside and out – this is true for many of the Roman examples and for Pisa – but it was not automatically the case, and there is no obvious pattern to whether a church had internal or external mosaic, or both. But these were all cities that thought well of themselves, were wealthy and claimed to have prestige and repute. Papal associations may have been another factor. Orvieto, for one, had been used as a base for the papal court by five popes in the late thirteenth century; Siena demonstrated its support for the pro-papacy Guelphs by adding a second story to the Cathedral and decorating it with mosaics.[32]

Quite where the trend for façade mosaics came from is unclear. It was a distinctly regional response to the issue of how to decorate a façade and entrance appropriately, and the use of mosaic may reflect that medium's considerable influence in Italy. Such mosaics were a good way of creating an identity for ecclesiastical structures and even of creating an aura of 'venerability'. Façade mosaics may have been a nod to Early Christian tradition, for example at St Peter's, the Lateran and S. Maria Maggiore, or to renovations in Rome at the time. Such mosaics may reflect a very obvious display of wealth; they may have become a fashionable cathedral accessory, something to emulate, something different from the usual sculptures. The glitter of a mosaic façade certainly made it highly visible. In Rome especially, mosaic may have been increasingly used on the exterior as *opus sectile*, Cosmati work and mosaic floors were used inside the building. And as Gothic architecture and stained glass became increasingly popular, the space for mosaic inside a building became limited. In light of some of the debates about mosaics that this book has engaged with, it is worth noting that façade mosaics do not seem to have been a feature in the Byzantine Empire: one is known to have existed at St Demetrios in Thessaloniki (seventh century); another at the Church of the Nativity in Bethlehem, supposedly placed there by the Empress Helena in the fourth century.[33] In contrast, however, façade mosaics were very much a feature of mosques from the seventh century into the thirteenth.

However, the most impressive surviving façade mosaic is that of St Vitus Cathedral in Prague, showing the Last Judgement, and occupying about 85 square metres.[34] The left-hand panel shows the resurrection of the dead, the right-hand the damned thrown into hell; in the centre is Christ in glory, flanked by angels and positioned above the patron saints of Bohemia; below, the Holy Roman Emperor Charles IV (1355–78) is shown with his fourth wife. This mosaic was Charles' commission and he appears

to have been inspired by what he saw in Italy on trips in 1331–33, 1355 (when he was crowned in Rome) and 1368. Charles also visited Lucca and Pisa, Lucca possessing a church with façade mosaics, and the Prague Last Judgement shares some similarities with the mosaics of Padua and the Florence Baptistery, as well as with mosaics in Venice.[35] Indeed, iconographically, it has many 'Western' features, including local Bohemian elements.[36] It is recorded as being made between 1370 and 1371 – very rapid compared to Orvieto, where the mosaics dragged on between 1321 and *c.* 1390 – and the fourteenth-century chronicler Beneš Krabice described it as a glass image in the Greek style ('opera vitreo more greco') and as a Greek-style mosaic ('opera mosaic more Graecorum').[37] Nonetheless, the glass for the tesserae was local, from Bohemia, and although the mosaicists almost certainly came from outside Bohemia, where there does not seem to have been a tradition of mosaic-making, they were probably Italian, though whether from Venice or Rome is unknown.[38] Charles' connections with the papacy have led to scholars favouring the second option as the more likely. The Prague mosaic was one with a very personal agenda: Emperor Charles deliberately chose to have a mosaic façade for his church, and that façade served to emphasise his links with Italy and, more particularly perhaps, Rome.[39] Despite the 'more greco', little in Charles' image speaks to Byzantium: façade mosaics were an Italian phenomenon that Charles observed in Italy. But in his choice of the scene of the Last Judgement, Charles was thinking about his salvation, his wife's salvation and perhaps the salvation more widely of his people, of whom the king and God were both judges. This, one of the latest mosaics in the book, shares its eschatological message with one of the earliest, S. Pudenziana.

The thirteenth century was a time when mosaicists, like artists in other media, start to be identified by name in the West if not the Byzantine Empire. But as with mosaics, so with mosaicists: known mosaicists in the fourteenth and into the fifteenth centuries drop away. Where names do crop up, it is possible to trace a picture in which some mosaicists travelled widely for work and others were more localised. So, for example, no non-Venetian artists are recorded in S. Marco in the fourteenth century, but it is a different picture in the fifteenth when Tuscan artists and mosaicists such as Uccello and Castagne were employed there, and fifteenth-century Venetian mosaicists are found working in Rome: Luigi de Pace at the Chigi Chapel. It is also clear that many mosaicists could and did turn their hands to painting: Orcagna worked in mosaic in Orvieto and fresco in Florence; Lellio in both media in Naples; Cavallini in both and, best-known perhaps, Cimabue, Giotto and the Ghirlandaio brothers, who also worked in other media including wood and stained glass. But, as the case of Giotto shows, the story of mosaics and their artists in fourteenth- and fifteenth-century Italy has been all but written out of art history. Why the abrupt cessation in the fifteenth century is a question I will return to at the end of this chapter.

BYZANTIUM

In Byzantium, although artists' names have started to appear in other media, wall painting and icon painting in particular, no records survive identifying any wall mosaicists, and whether artistic practices, notably that of working across media, were the same here as in Italy is a matter of surmise only. The two centuries of the rule of the Palaeologan dynasty over what remained of the Byzantine Empire after its restoration in 1261 until its final defeat in 1453 were not a golden age of urban construction: large areas of Constantinople remained undeveloped and uninhabited, with many ruined buildings. But building



Figure 162 South dome mosaics from Vefa Kilisse Camii, Istanbul, fourteenth century. Mary holding the Christ-Child before her is in the centre and eight Kings of Judah stand above the windows. The window arches have elaborate eye-catching patterns in gold glass mosaic on white stone.

work did take place in the city and the early fourteenth century saw a burst of mosaic-making, with evidence of four mosaic programmes still remaining in the city. A mosaic of the Mother of God 'Zoodochos Pege' may well have been installed at the Pege shrine in Constantinople in the very early years of the century.[40] The surviving mosaics from the mosque of Vefa Kilisse Camii may perhaps date to *c.* 1300.[41] They are contained in the three domes of the outer narthex and in the arches of the windows. The mosaics are most complete in the ribbed south dome (Fig. 162) where there is a roundel of a bust Virgin and Christ-Child in the centre and eight figures identified as the Kings of Judah in flutes. The central pumpkin dome has a rainbow border round the central medallion, which may have contained a bust of Christ, and there are the remains of six prophets between the windows. It is very plausible that if the narthex, the outermost area of the building, held mosaics then the rest of the church was also mosaicked, but the interior of the church has never been stripped of its plaster, and so we simply do not know. Vefa Kilisse Camii has not been identified with any particular Byzantine church, nor securely dated: its core may perhaps be eleventh or twelfth century, with a thirteenth- or fourteenth-century Palaeologan addition of an outer narthex.

A similar programme of Palaeologan additions is apparent at the Pammakaristos Church (now the mosque known as Fethiye Camii).[42] This was originally a twelfth-century foundation by an otherwise unknown John Komnenos and his wife Anna, whose church appears to have been decorated with mosaic throughout. Some fragments of ornament remain in the arch and windows, and an inventory of the tombs in the church dating to the sixteenth century records a large tomb in the church with a representation of the husband and wife in mosaics; it also claims that the tomb of the emperor Alexios I Komnenos was there, with his figure represented



Figure 163 The mosaics of the apse, bema and dome in the parekklesion of the Pammakaristos Church (Fethiye Camii), Istanbul, fourteenth century.

in mosaic with a mosaic inscription.[43] The church was restored by the important imperial official and general Michael Glabas Tarchaneiotes and his wife, Maria Doukaina Komnene Branaina Palaeologina, whose surnames give an indication of her standing, containing as they do three imperial family names, and none of her husband's. Michael died soon after 1304 and Maria (who became a nun and lived on beyond 1345) added a parekklesion, a burial chapel, to the church between 1305 and 1310. Long inscriptions by the court poet Manuel Philes inside and outside the parekklesion describe Maria's dedications to her husband and her prayers for his salvation.

The parekklesion is a small and intimate space, albeit an elaborately and expensively decorated one with its marbles, sculpture, paint and gilding, and Maria's mosaics underline its core messages of death and burial (Fig. 163). The apse mosaic

depicts an enthroned Christ; he is flanked in the lunettes of the side walls by images of the Mother of God and John the Baptist (suggesting Christ in Judgement; Christ awaiting the righteous dead). The busts of four archangels are located in the cross vault above the bema. Christ is also shown as Pantokrator in the dome; twelve prophets stand below him, above the windows. The pendentives have lost their decoration but were probably occupied by the evangelists. Below, there may have been scenes from the life of Christ: two surviving images, the Baptism and what looks like an Ascension, suggest the themes of salvation and life after death.[44] An extensive gallery of bishops' portraits, thirteen in all, remains in the side chapels and in the two corner compartments of the nave on the east side. They include James, Clement, Metrophanes, Gregory of Nazianzos, Athanasios and Cyril of Alexandria. In the south-west compartment of the nave was a group of six monks; and it is likely that a similar group of saints was shown in the north-west, perhaps warrior saints for Michael who had been a successful campaigning general. At the lowest level of the church, mosaic panels were let in to the marble revetment, notably a (no longer surviving) mosaic of Michael over his tomb. Some of the mosaic ornamental details relate closely to those used elsewhere in Constantinople at the Chora Church and at Arta and the Holy Apostles in Thessaloniki, as well as in frescoes at Mistra, and are interpreted as proof that the artists at all three of these sites came from Constantinople.[45] Small areas of the mosaics replace tesserae with paint. This may hint at either a shortage or a saving of materials, though the areas where paint is used (for example on the feet of the Baptist) and the quantity of gold tesserae make it more probable that this is another example of that technical device regularly used in mosaics. It does imply that, as were their Italian counterparts, these mosaicists were comfortable across media. What is not known is where the tesserae came from: were they newly made for the mosaic (and if so, where?); or reused from elsewhere in the city?

The mosaics of both Vefa Kilisse Camii and the Pammakaristos parekklesion form part of a redevelopment of earlier buildings by fourteenth-century patrons. A third example of this same trend comes with the refounding of the Church of Christ in Chora (better known now as the Kariye Camii) between 1316 and 1321 by Theodore Metochites (b. 1270, d. 1332), chief minister of the Emperor Andronikos II. Like the Pammakaristos, the Chora had an imperial history: it was believed to have been founded by Justinian and had certainly been renovated by Maria Doukaina, mother-in-law of Emperor Alexios I Komnenos in the eleventh century, and then by her grandson, Isaac Komnenos.[46] Such weighty associations were perhaps part of the draw of these buildings for these new patrons.

Theodore Metochites did more than add a parekklesion to the Chora: he also rebuilt and refurbished the church, decorating it with a costly marble revetment and with mosaics (Fig. 164) throughout the main building, nave and narthexes alike, on domes, walls and vaults.[47] Presumably by choice, mosaic was not used in the parekklesion, which was almost certainly decorated at the same time as the rest of the church. Only a few mosaics survive in the nave: a Mother of God and Child; St Paul; the Death of Mary above the door. However, the double narthex retains most of its mosaics, which depict the life of the Mother of God (seventeen different scenes in the inner narthex, plus seventy ancestors of Christ in the domes) and then the life of Christ, notably his nativity, infancy and ministry, in the outer narthex (Fig. 165). This narthex was originally an open portico, enclosed when the tombs were inserted, meaning that the mosaics of Christ originally formed an exterior decorative



Figure 164 View of mosaics in the outer narthex of the Chora Church (Kariye Camii), Istanbul, fourteenth century. Christ is above the door, with the Nativity to the left and the Feeding of the Five Thousand to the right; Mary is down to the left flanking the door, and through the door the great standing Christ of the Deesis is just visible.



Figure 165 View into the south inner narthex pumpkin dome, Chora Church (Kariye Camii), Istanbul, fourteenth century. The dome has Christ at the centre, with his ancestors below and then scenes of his miraculous healings in the pendentives.

programme – the only evidence for such façade mosaics from the empire in this period.

Theodore made sure his own presence in the church was not overlooked. A donor portrait over the door between the inner and outer narthexes, the original entrance into the church, echoes the imperial image in the narthex of Hagia Sophia: Metochites is on his knees before Christ, offering his church; the right-hand side of the panel is empty. The gold trefoil background is also evocative of Hagia Sophia, this time of the Deesis panel. The image ensured that Theodore set himself with Christ on the east–west axis of the church; any visitor or worshipper entering was greeted first by Christ, then by Theodore and Christ, and then by whatever was in the apse – almost certainly Christ again. A huge Deesis on the wall to the right of the door into the nave (see Fig. 24) depicts two figures, a crowned man identified as Isaac Komnenos and a nun labelled as Melane, often identified as Maria Palaeologina, sister of Emperor Andronikos II, reminding worshippers of two of the former imperial benefactors of the monastery and its church.[48] The size of the mosaic is such as to make it almost unviewable in the narthex itself and it seems designed to be best seen at an angle from the main entrance to the inner narthex and with the mosaic of Theodore Metochites in view.[49]

Like the Pammakaristos, the Chora was a burial church for the patron and its images speak of Theodore's fear of divine judgement and his hopes for salvation. It was also a monastery church, dedicated to Christ 'the dwelling place of the living', and endowed with substantial estates, a hospital and public kitchens, a monastery in fact where Theodore would end his days. In his mosaics in the church, Theodore set out to show himself off, highlighting himself overtly as patron above the door but also using the imagery in more subtle ways to make points about his position as the emperor's minister and about the role of the Mother of God as protector of church and city. His audiences for these displays were mixed: most immediately, his family and the monks of the Chora; but more widely perhaps, local residents of that aristocratic district of Constantinople, for it seems that the Chora was used as a short-term residence for the patriarch and a gathering place for clergy waiting for audiences in the nearby imperial Blachernae Palace.

But neither the Pammakaristos parekklesion nor the Chora was an imperial foundation. To the contemporary Byzantine author Nikephoros Gregoras, the most important building project in the second decade of the fourteenth century was not Metochites' Chora but Emperor Andronikos II's restoration in 1317 of Hagia Sophia and its adjacent Column of Justinian, followed by John V Palaeologos' (1341–91) work in the same church.[50] An earthquake in 1346 had caused considerable damage, bringing down the eastern arch of the church, the east semidome and a part of the main dome.[51] The repairs of the 1350s are said to have been undertaken by the imperial *stratopedarch* Astras and the Italian Giovanni Peralta who, disappointingly, seems to have been an engineer and a soldier, a Catalan commander under John, rather than a mosaicist and artist.[52]

The installation of mosaics on the rebuilt eastern arch and dome was a considerable undertaking. Nikephoros Gregoras may well have gone up the scaffold in Hagia Sophia himself to inspect the work, for he reported the dimensions of the Pantokrator in the dome. How accurately is another matter, but it is clear that this was a vast image, since the diameter of the central medallion of the dome is about 11 metres.[53] The seraphim still survive in the eastern pendentives, six-winged in grey, brown, blue and green tesserae, with finely modelled, grave oval faces peering out from the soft feathers (Fig. 166). On the eastern arch itself were four figures, an Orant Mary, the Baptist, John V and a final



Figure 166 A solemn Seraph from the eastern arch, Hagia Sophia, Istanbul, fourteenth century.

unidentified figure (possibly John's empress); they flanked an Empty Throne.[54] Despite their scale and impressive appearance, these mosaics were all completed quickly and with an economy of materials. Compared to the sixth-century mosaics of the dome, the materials are less good. The gold tesserae of the background are more widely spaced than those of the sixth century and mixed with silver and coloured glass tesserae; there is even some overpainting of the gold to define the outlines, all suggesting a shortage of gold tesserae and the need to be economical. Indeed, it is plausible that the gold tesserae were salvaged from earlier works, and other tesserae appear to have been gleaned from other sites. Crudely cut grey-white marble tesserae were used instead of silver, and only the interior halves of the window embrasures were mosaicked.[55]

In Constantinople generally in this late period, most important constructions were not from scratch but were additions to existing churches, chosen, at least in part, for their association with significant predecessors.[56] Nonetheless, the survival of the marbles and mosaics of the Pammakaristos, the Chora and Vefa Kilisse Camii suggests that there was enough money and material resources in Constantinople in this period to allow patrons to put on a good show. Theodore in particular is known to have been very wealthy, riches derived from his position as the emperor's leading minister between 1305 and 1328, when he shared in Andronikos II's downfall. Noticeably, in his own writings about the Chora, he mentioned not the wall mosaics or the paintings but rather the costly marble revetments, the mosaic decoration of the vaults and

the lavish fixtures and fittings of the church.[57] Maria and Michael were also affluent enough to restore the Pammakaristos as a monastery, as well as to commission the restoration of a chapel in the church of St Demetrios in Thessaloniki, though they may not have had access to the same range of imperial resources as Metochites. Nonetheless, this trend for lavish repair, decoration and the construction of a parekklesion should not hide the fact that this was still a faster and more economical way of founding a church than building from scratch. This has led to a belief that poverty caused restrictions in building practices in Constantinople, for in the same period in cities such as Trebizond, Arta, Mistra and Thessaloniki construction took place from new. But how far this really signified greater wealth outside the capital is another matter, for much depends on the relative scales of building and rebuilding, decoration and redecoration.

In this context, we might ask how comparable the Chora and the church of the Holy Apostles in Thessaloniki – the only church known to have had fourteenth-century mosaics in that city – might be. The Holy Apostles appears to have been built from scratch in the early fourteenth century. It is a cross in square church, some 20 × 17 metres (the Chora is roughly 16 × 15 metres, but the Pammakaristos parekklesion is only some 15 × 5 metres), built with a wealth of ornamental brickwork around the outside. Inside, a combination of mosaic and painting within scenes is used, as at the Pammakaristos and the Chora.

The positions of the surviving mosaics suggest that originally they filled much of the church. What is still there includes a Pantokrator and prophets in the dome, evangelists in the pendentives, and scenes from the life of Christ (Annunciation, Nativity, Presentation, Baptism, Transfiguration, Entry into Jerusalem, Crucifixion, Anastasis and Dormition) and assorted saints in the body of the church.[58] There is nothing in the apse: the most likely explanation is that whatever was there has been destroyed. In the Ottoman period, when the church was used as a mosque, the mosaics were whitewashed over and they have now lost almost all of their gold background.

Though the Holy Apostles is larger, the twin narthexes of the Chora suggest that it contained more mosaics. The mosaics of both, however, are remarkably similar in appearance, so alike that it seems probable that the same team was responsible for the two sets, though it is not known which came first, nor whether the mosaicists were from Thessaloniki or Constantinople.[59] This is because the date of construction of the Holy Apostles is disputed. Three inscriptions inside the church identify Patriarch Niphon I (1310–14, when he was deposed for simony and retired to a monastery in Constantinople) as its patron, in terms that suggest he was still patriarch, with the assistance of one Paul. However, a study of the dendrochronology indicated that the church was built all of a piece and offered a date of 1329 or just after, some fifteen years after Niphon's removal from office. In art historical terms – discussions of style and iconography – the case can and has been made both ways. But if the dendrochronology date is accepted, then the Holy Apostles must have followed the Chora (1321) and so, if the same team of mosaicists was involved, it must have worked on the Chora first. This is no proof that the artists were from Constantinople, for Thessaloniki had a long-standing tradition of mosaic-making and elements of the style of the Holy Apostles have been compared to wall paintings in the region and in Serbia. More usefully, Otto Demus suggested that, though the Pammakaristos, the Holy Apostles and the Chora mosaics were all connected in their style, they were not copies of each other or of a common model but rather should be understood as free versions created by related workshops. I think this is plausible,

with the proviso that there is no reason to assume that all of these workshops were Constantinopolitan (it seems almost certain that Thessaloniki could and did house at least one painter's workshop in the fourteenth century: could it also have supported a mosaic workshop?) and the comment that it would be interesting to know where the glass for each came from.[60] What the similarities between the Holy Apostles and the Chora (and indeed the Pammakaristos and Vefa Kilisse Camii, since all share stylistic likenesses) also reinforce is the concept of itinerant artists, and the probability that artists, especially those working on monumental art, needed to move from place to place to stay in work.[61]

Why Patriarch Niphon might have founded this church in this city rather than, say, one in Constantinople is unknown. One factor may have been that the fourteenth-century founders and refounders of churches and monasteries in Constantinople were largely members of the lay aristocracy, whilst in Thessaloniki they were predominantly clerical and monastic. Linked to this may have been the fact that he was from this region. Thessaloniki itself was a centre for artistic patronage, with a large number of churches with high-quality decoration in media other than mosaic built in that period, influenced by local developments, local piety and, above all, the monastic communities of Mount Athos, just down the road.[62] It was a wealthy city and notables from the Constantinopolitan government and supporters of Andronikos II, including both Michael Glabas and Theodore Metochites, spent time there – and in Michael's case at least, money on commissioning buildings and art. In fact, the Chora and the Holy Apostles are remarkably similar: both were built by officials of the empire, doubtless from the resources of that empire; they shared the same traditions of mosaic-making, perhaps even the same artists. Constantinople and Thessaloniki were perhaps not as far apart as we imagine.

With the restoration of their empire in 1261, the Byzantines had had artistic choices to make. Did they want to adopt the sort of imagery apparent in the St Francis fresco of the Kalenderhane Camii? Did they want to have art that looked Western and modern; or did they prefer to stick to the old traditions? On Venetian Crete and Lusignan Cyprus, icons and wall paintings reflect both Byzantine and Western elements, sometimes in the same work of art; in the Kingdom of Acre in the Levant, Byzantine and Western elements were assimilated into the same manuscript, in the *c.* 1250 Arsenal Bible (Paris, Bibliothèque de l'Arsenal MS 5211), for example. In Pisa, at much the same time that the Chora was being mosaicked, the Cathedral gained its mosaics from, among others, Cimabue, whilst at Padua Enrico Scrovegni selected Giotto to use the modern technique of fresco rather than mosaic in the Arena Chapel, and also chose to have the images of his chapel tell a particular story. That story was not the same as the one that Theodore Metochites in Orthodox Constantinople or Patriarch Niphon in Thessaloniki needed or wished to tell. But, in theory, Theodore might have been in a position to choose Giotto-like work and Scrovegni to adopt imagery like that Cimabue used in Pisa. In this world of change, were the Chora mosaics closer to images from earlier Byzantine or to later Western art?[63]

Nothing survives from after the 1320s and the Chora. Whether this was the 'last' Byzantine mosaic will never be known. But in *c.* 1427, almost a hundred years later, someone added a painted image of the Mother of God and Child on a mosaic background to the façade of a small church in Greece, the Church of the Virgin Pege, at Pikouliana in Lakonia.[64] Whether this was a faint reflection of practices in the West, a distant memory of far-off Constantinople or simply a reuse of handy local resources, the church at Pikouliana reminds us of

those mosaics, so much a feature of the earlier chapters of this book, of the small, localised churches in the Levant from where handfuls of tesserae survive. Was Pikouliana one of the last in a tradition that had continued since the fourth century of modest local mosaics or was it a final hurrah to the great imperial mosaics of the empire, or something in between?

The stories of medieval mosaics fizzle out to an unspectacular conclusion. The increasing poverty and final end of the Byzantine Empire on Tuesday 29 May 1453 also brought an end to mosaics in that empire. Mosaics were not a feature of the Ottoman world and not one that they embraced. Elsewhere in the Islamic world, after the brief Mamluk flourish of the thirteenth and fourteenth centuries, mosaics survived as relics of the glorious past in the greatest mosques of Islam, but not as a living, practised art form – but then, they had never been a major art form either. In Italy, the easy answer would be that mosaics were a Byzantine art form, and with the loss of Byzantium, so too the loss of mosaic.

Except that this is too simplistic. There is no reason that the fall of the Byzantine Empire should have affected mosaic-making elsewhere in the Mediterranean. It is clear that mosaics were thriving in thirteenth- and fourteenth-century Italy as an Italian art form. All of the mosaicists whose names are known from between 1270 and 1529 were Italian; to underline this, wherever evidence does exist of one Italian city looking for help with its mosaics, it shows Italians finding other Italians: Pope Honorius III's request for Venetian help at San Paolo *fuori le mura*; the Florentines turning to Venice for assistance with their Baptistery; and evidence from Orvieto in the fourteenth century showing that the mosaicists working there came from Perugia, Rome and Florence. Materials were not a problem either, since, by the thirteenth century, glass tesserae for mosaics were being made in Venice and indeed elsewhere in Italy.

What then explains the cessation of mosaic activity in Italy? One thing is that in the late fourteenth and early fifteenth centuries, fashions moved on. At the same time as the apse mosaic of S. Maria Maggiore and the Life of the Virgin panels at S. Maria in Trastevere were installed, fresco was being used at S. Francisco in Assisi; a few years later, when Stefaneschi chose mosaic for Giotto's *Navicella*, Scrovegni elected for fresco at his chapel. Fresco was cheaper than mosaic, and quicker to use, and artists could employ it in ways not possible, or not effective, in mosaic; fresco for Scrovegni was also perhaps a way of visibly eschewing the over-luxurious effect of mosaic. Tastes also seemed to move away from material richness in some contexts and towards illusionism. As the 'classical' became increasingly popular, so artistic emphasis increasingly lay with spatial illusion, on three-dimensionality in the figures, on relief and chiaroscuro and a preference for ever more complex postures and figural movements. So developments in painting technique, moving towards what we define as 'Renaissance art', with its emphasis on naturalism and classicism, contrasted only too sharply with the Early Christian elements of mosaic in places like S. Maria Maggiore and even St Peter's. It seems that patrons preferred what could be done in paint to what could be achieved in mosaic – and presumably, they liked the relative costs as well. Mosaic was expensive compared to other media, and its use in the early sixteenth century by the exceptionally wealthy banker Agostino Chigi, in his chapel designed by Raphael in S. Maria del Popolo, served as a typical ostentatious display of his riches.[65]

In Rome above all, mosaic was a papal medium. When the papacy went to Avignon in the 1340s, papal patronage in Rome ceased. The papal court started to imitate and use French modes, the Gothic in particular. But Gothic architecture is a form which does not work well with mosaic; there are too many tall

pointed windows letting in light, too many straight surfaces, too much stone sculpture, and too much stained glass.[66] Furthermore, once popes moved towards other forms of artistic patronage, mosaic must have lost an element of its prestige as a chosen medium for the Christian faith. Where a Nicholas IV (1288–92) had used mosaic in the Lateran and in S. Maria Maggiore as a mighty vehicle proclaiming the papacy's links to its great apostolic past, a Julius II (1503–13) could commission the destruction of St Peter's itself, an act of unsurpassed vandalism, but one that suggests that the Early Christian heritage of Rome no longer carried the same significance that it had previously. Indeed, Julius' own tastes and ideals were strongly classical. He collected antiquities and displayed them in the Vatican Palace and in Raphael's Stanza della Segnatura, a library and study thoroughly classicizing in its theme and style. His vision for Rome and his papacy was to restore the ancient, not the Early Christian, glories of Rome as a statement of temporal and spiritual power; classicism was increasingly the locus of prestige. And so the world was changing. The great cycles of the apostolic basilicas in Rome did not connect to the 'modern' sanctoral and Christological cycles of the north Italian *Commune* churches; they had different roles and different audiences. Increasingly too, as mosaic became identified as 'Byzantine' and 'Greek', dated, old-fashioned, stiff and comic, not the medium of a great artist such as Michelangelo, so this served to discredit it as a medium.[67] The fourteenth-century Black Death wreaked havoc across western Europe, leaving a decimated world that looked very different to what had gone before; Constantinople fell and the Byzantine Empire ceased to exist. Mosaic lost its lustre, lost its glitter and its appeal for patrons. Perhaps, in the end, it may just have been too demanding and too cumbersome, not flexible, neither modern nor classical, increasingly a luxury item with a dwindling market able and willing to afford it, as fashion changed, so it was no longer the medium of a universal Christian, Roman community.

IN CONCLUSION

I opened the book with the mosaic in the apse of S. Clemente. At first sight, it is a mosaic that overwhelms the spectator: there is so much going on, it is so complicated, so big and bright, that the viewer takes a step back. But by stopping to look at the details, it becomes obvious that this was an image made with a huge amount of skill and at no little cost, if the scale, colours and media are anything to go by. And through the minutiae, it becomes apparent that this is also a highly sophisticated image, one packed with theological significance, yet also able to speak to the most ignorant audience.

It is also a mosaic that presents a challenge to the preconceptions and biases that have underlain many of the ways in which mosaics have been studied, above all in terms of their essential Byzantinism, or lack of it. Implicitly, in the past mosaics have been presented within a model that sought to explore what of each mosaic can be defined as 'Byzantine', aspects such as style, iconography, artists and even quality. S. Clemente as an impressive mosaic in Rome with nothing particularly 'Byzantine' about it has no place in this paradigm. And so to open up the possibility of taking mosaic away from Byzantium alone, I proposed a different set of questions. Some were very basic: How much mosaic was there in the medieval world? Is it possible to make any sort of estimate? How much of it can be defined as 'Byzantine'? Others related to the making of mosaics and questions of supply and demand, of technology, manufacture, and costs: How expensive was mosaic? Equally simple, but as deceptively easy: Why did people want mosaic? What did they achieve through the use of the medium?

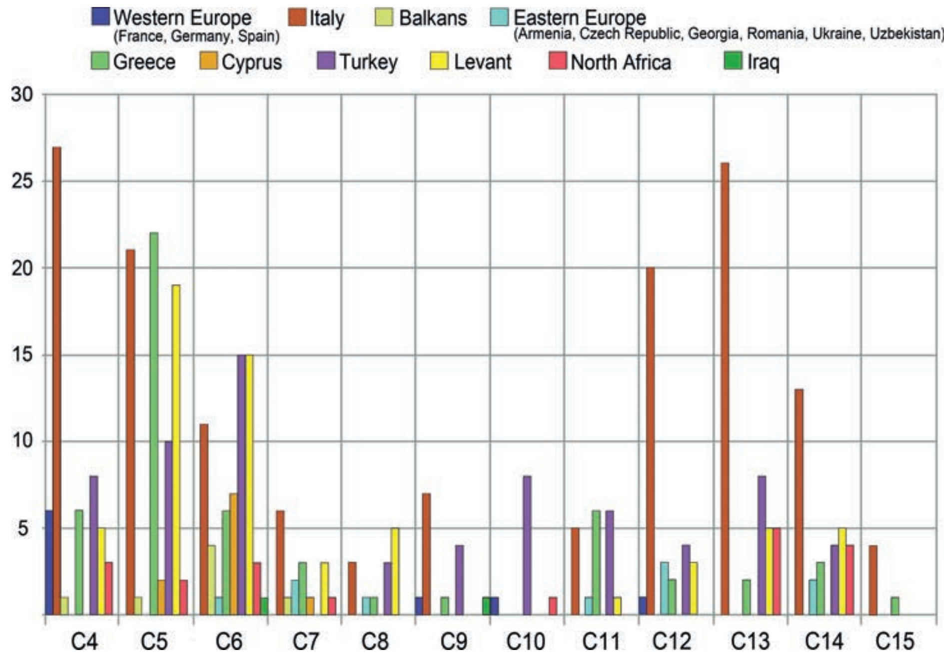


Figure 167 New wall mosaics by century and region.

To answer those questions now, I would say that there were more mosaics in the Middle Ages than has been realised and so we need to rethink how they might be understood in terms of their manufacture and the effects that they had on the worlds around them – and the influences those multiple worlds had on their making and function (with the rider that it should never be overlooked just how partial and incomplete the surviving material is). Further, the spread of mosaics and the fluctuations in mosaic numbers over time suggest some tentative conclusions. Figure 167, which brings together the figures from all of the maps, demonstrates that mosaic-making had its highs and lows. It implies that mosaics were most popular in the fourth, fifth and sixth centuries, with a decrease in the use of the medium between the seventh and tenth centuries, then a steady revival in the eleventh, twelfth, thirteenth and fourteenth centuries, followed by a dramatic drop in the fifteenth, after which mosaic has never been widely used again. The reasons for these shifts are not obvious. For that first decline, it has been suggested that Iconoclasm affected the making of art in the Byzantine Empire and that artists were compelled to flee and that this had a knock-on effect on what was produced where. This seems unlikely, for art, including mosaics, continued to be made in the empire during this period.[1] Nor does Iconoclasm explain the decrease in the use of the medium throughout the Mediterranean more widely. A better explanation may lie in the upheavals and conflicts of the late sixth, seventh and eighth centuries and the rise of Islam, that traditional shift from the 'Roman' to the 'medieval' world. It may be as simple as a reflection of changes in glass technology in this same period (the move from soda-lime to plant ash glass) and a potential shortage of the materials for mosaic-making. For after this shift, it is unclear how much glass was imported into Byzantium and Italy from the Islamic Levant, and how far the manufacture of glass in the West, especially at Venice, made a difference and may have helped to fuel a revival of the medium.[2]

Figure 167 also makes visible the distribution of mosaics across the Mediterranean world,

highlighting in particular the quantity of mosaic surviving from Italy. Exploring this in more detail within the book suggested that the material evidence for 'Byzantium' as the *fons et origo* of mosaic-making is limited: the tenth century is the only time where Constantinople appears as the major centre of mosaic production. In part, this is the result of the vagaries of survival, for written sources make it very clear that there was more mosaic in the city that no longer exists. Nevertheless, the quantity of wall mosaics surviving from Italy across the Middle Ages suggests a continuous tradition of mosaic-making there and highlights the significance of Rome in particular as a centre for mosaic production.

Indeed, throughout, it seems that the relationships between centres of production in terms of materials, styles, techniques, iconography and artists are far less clear cut and therefore more interesting and complex than is often assumed. Throughout the book I have contested the idea that mosaics and mosaicists alike came in the first instance from Byzantium, and I have suggested that it is plausible that there were cities other than Constantinople where the art flourished without the need of a 'Byzantine' input – Rome, Thessaloniki, Antioch, for example. Even in Venice and Sicily in the twelfth century, where the mosaics are so often defined in terms of their 'Byzantineness', the case can be made that the Byzantine look was through the choice of the patrons, not a need for 'Byzantine' artists. Once 'Byzantine elements', however defined, become choices, then many more questions can be raised about why such decisions were made. And where cases can be made for Byzantine artists (which is to say artists from the Byzantine Empire itself) being involved in mosaic-making, as in tenth- and eleventh-century Kiev, and as perhaps at Monte Cassino in tenth-century Italy, then political factors seem key, in relation both to Byzantium and to local situations.

Political events may consistently have had an effect on the creation of new work; concurrently, the creation of new mosaics may have been in turn a political statement. The use of mosaic in fifth-century Ravenna was almost certainly Theoderic's bid to establish that city as a suitable capital for a ruler aspiring to imperial traditions. He may have copied the idea from Byzantium or Rome, but his appropriation was surely noticed and responded to in Italy, if not necessarily in Constantinople. Similarly, from the eleventh century on, the use of mosaic in the great city church of S. Marco in Venice was as much a political statement as an artistic one, both an adoption of the medium and a throwing down of the gauntlet to rivals, both local and international. Very specific local factors may also explain the presence of mosaics at particular locations, for mosaics offer snapshots of moments when patrons felt it was worth investing in the medium, moments when its value was specific to a person and to a building. The wall mosaics in Caričin Grad, Justiniana Prima, in the sixth century, were surely a reflection of that city's foundation by Justinian I, marking out his birthplace.[3] In contrast, although Justinian and Theodora are depicted in the mosaics of S. Vitale in Ravenna, they never went to Ravenna and nothing suggests that they were the patrons of the work. Rather, the mosaics were the project of local notables and must have rebounded to the credit of those men: the banker Julianus Argentarius and the city's bishop, Maximian, the latter depicted as a member of the imperial court.[4] The use of mosaic at Germigny-des-Prés in the eighth century, coupled with that church's unique iconographic programme, appears very much as the personal decision of the patron of that church, Theodulf, bishop, servant of Charlemagne and author of the *Libri Carolini*.[5] Similarly, the patrons of mosaics in Georgia, Rus' and Armenia may have had individual reasons, in addition to more general ones about expressing prestige and

demonstrating value, for favouring mosaic as their medium of choice. In the twelfth and thirteenth centuries, when mosaics in Italy dominate the maps, the increase in the number of places with wall mosaics is probably a reflection of local rivalries and competition between major Italian cities. In Rome, the almost constant papal renovation and creation of mosaics served to underline both the city's status and the prelate's piety in contrast to any possible rivals. Taking the long view has also made it possible to show the development of a repertoire of images and themes across the centuries, especially in Rome, and the variations made by patrons in relation to their needs and historical circumstances.

In terms of both its manufacture and its costs, mosaic was never as easy and as cheap to use as painting; that has become clear from the material discussed in Part I. The presence of a mosaic indicates that a patron had access both to the materials needed for making a mosaic and to the workers required to put it in place. Obtaining coloured glass tesserae was a logistical issue in itself; actually designing and making a mosaic was an even more complex and time-consuming process. We actually know a surprising amount about both the technology used in making the materials for mosaics and the techniques used in making them, and making them effective. This not only tells us a lot about the sources and dispersal of materials and techniques but should also inform the way we perceive and respond to the visual qualities of mosaic. An awareness of the geographical and temporal extent and distribution of wall mosaics contributes to an understanding of issues concerning the manufacture of the raw material of mosaics, glass, and indeed vice versa. However, much more remains to be done to see if patterns of tesserae manufacture, import and trade can be pieced together; if they can be, then the glass from mosaics can offer a picture of one form of trade network within the Mediterranean, not only East and West but also Islamic and Christian. Put this together with the hypothetical data about costs, then it can also form part of a wider debate about wealth and the use of wealth in the medieval world.

However, while the material on technique fleshes out our understanding of the complexities of making mosaics, my primary focus has lain with the issue of what people, especially patrons (and I acknowledge that they are only one part of the story) wanted from mosaic. The bulk of mosaic material that survives comes from churches and other religious constructions, though it is clear that, especially in the fourth and fifth centuries, it was also used in secular buildings, including private homes. This pattern may reflect survival rather than reality; equally, it may also be an indication that it was a popular medium, though one particularly appropriate for use in lavish religious edifices. The archaeological evidence also implies a considerable and diverse pattern of patronage, for it is clear that mosaics were used in both rich and poor churches, large and small buildings. In this context, rather than cataloguing them, I have explored how the individual mosaics and also the medium itself might, or might not, help to explain the events going on around their use and production.

A snare in this story of mosaic has been to avoid reconciling the inconsistencies of history, trying to make a coherent picture of something never coherent even at the time. It involves accepting that what survives is so patchy, so fragmentary that it does not necessarily hang together – why should the mosaics of the Rotunda in Thessaloniki look anything like any other extant mosaics from the fourth or fifth century? But in doing this, I have smoothed over and overlooked certain changes in mosaic forms and functions over time. An image such as the fourth-century Bacchic putti in S. Costanza may have 'meant' one thing to its patron and another to its audience, and something totally different to any sixteenth-century viewer. A mosaic could change its significance as what was around it also

changed: in Hagia Sophia, placing the twelfth-century panel of Emperor John II Komnenos and his wife next to the eleventh-century one of Constantine IX and Zoe may have affected the ways in which both the older panel was viewed and the newer panel conceptualised. These are issues that matter, but to understand them required the foundation of setting out the development of mosaics century by century.

While the material presented here is disparate, it has one unifying theme in particular. In the Middle Ages, mosaic was a Mediterranean medium, evocative both of imperial Rome and of Christianity. When mosaic later lost this value, it became unfashionable and thus too costly to survive. Whether it was invented in Rome or in the Eastern provinces of the Roman Empire, it was a medium popular in the heartland of the empire, Rome and Italy, used in the eastern Mediterranean and North Africa. It continued to be employed in these same regions, perhaps to a lesser extent in Egypt and the countries of North Africa, throughout the Middle Ages. It is less often found in the northern and western parts of the Roman Empire, and though it was not unknown there, medieval mosaic in these regions is much scarcer. From the beginning, although the medium was used by those at different points on the social scale (the fountains in modest private houses in Pompeii bear witness to this), it was applied on a monumental scale by emperors, above all in palatial buildings and mausolea. Mosaic appears to have retained this imperial aura, particularly perhaps in Byzantium, where it continued to be a medium of choice for members of the imperial family. Here it was redolent both of Byzantium's Christian heritage and of its living tradition as the incarnate Roman Empire, God's Chosen Empire on earth. Above all, the sense of *romanitas* underlay its use in both East and West, changing in significance as attitudes to and ideas about the Roman Empire changed. In Rome, as the local status of the emperor waned and that of the pope rose, it became increasingly associated with the Apostolic, Early Christian, Constantinian and papal church, a mixture of connections and resonances that gave its use particular significance in that city and in the wider Christian world, a challenge and a living alongside Byzantium. Mosaic was hallowed by tradition so that certain iconographies – the phoenix, the red and blue clouds in so many Roman mosaics between the fourth and thirteenth centuries – continued to be employed because they went back to Constantine, even to Peter and Paul. When such iconographies were employed by more far-flung rulers and prelates, be they Charlemagne, Theodulf, Amaury of Jerusalem or Charles of Prague, they almost always carried with them some echo, some evocation of these influences. When mosaic lost its significance, then it lost its potency and value and ceased to be employed.

This idea of the iconographies of a Christian community with an identity derived from and borrowing from Rome after the end of the Roman Empire is not a new one in the political sphere.[6] But the same is true of the material world: mosaic is a case in point. Its continued use, especially in the continuous repairs made to the mosaics of the great buildings of the past, surely suggests that its prestige had been internalised and translated into a relevant cultural medium. Even in the Islamic world, mosaic retained something of its same power. Its appropriation in the first instance in the seventh century surely mirrored the wish of the Umayyad caliphs to place their empire and their religion on at least an equal footing with those around them. So mosaics carried a value in themselves through the medium; they spoke a common visual language across cultural and religious boundaries with both specific contexts and meaning but a broader Mediterranean currency, the universal used to frame the particular.[7] This was the power of mosaic.

APPENDIX: SITES BY CHAPTER AND CENTURY

The Appendix is a list of the sites shown in each map within the book, arranged in order of chapter. The sites mapped are those for which physical evidence of wall or vault mosaics exists: further information about all sites can be found on the Database of Roman and Medieval Wall Mosaics www.sussex.ac.uk/byzantine/mosaic/. This is an open-access site established through a Leverhulme International Network Grant. The database was built by Bente Bjornholt in 2007 and maintained by her and Wendy Watson.

Each map only records new mosaics. Where the date of the mosaic crosses more than one century, this has been noted but the mosaic mapped into the earliest century. Cosmati work and tomb mosaics are not recorded here. Neither the maps nor the Appendix record mosaics where only textual evidence survives; detached panels whose origins are unknown are also not recorded.

The lists are arranged by region, running roughly left to right across the maps; within that, they are organised alphabetically by town or city and then by type of monument (bath, church, fountain).

Total number of mosaics included: 387.

IN THE BEGINNING: WALL MOSAICS IN THE FOURTH CENTURY

Total: 56

Spain

Mausoleum of Constans I (?), Centcelles, Taragona

Germany

Euren Roman villa, Euren

Aula Palatina or Basilica of Constantine, Trier

Baths, Imperial Baths, Trier
Church of St Peter, Trier
Pfalzel Palace, Pfalzel, Trier

Italy

Baths, Aquileia
Church of S. Maria Assunta, Aquileia
Bath, Faragola Villa, Ascoli Satriano (4th–6th)
Chapel of S. Aquilino in S. Lorenzo Maggiore, Milan
Baptistery of S. Giovanni in Fonte, Naples (4th–5th)
Fountain niche, Ostia
Fountains, Domus delle Colonne IV-III-1, Ostia (4th–5th)
Nymphaeum, Domus della Fortuna Annonaria V-II-8, Ostia (4th–5th)
Unknown structure, outside Porta Marina, Ostia
Bath or mausoleum, Ponte Ospedale, Palestrina
Catacomb of S. Agnese, Rome
Catacomb of S. Callisto, Rome
Catacomb of S. Domitilla, Rome
Catacomb of S. Panfilo, Rome
Catacomb of S. Priscilla, Rome
Church of S. Costanza, Rome
The Lateran, Rome (possibly the head of Christ)
Church of S. Pudenziana, Rome
Tomb of the Julii under St Peter's, Rome
Hypogeum, Via Livenza, Rome
Mausoleum of Helena, Rome
Nymphaeum, Villa Barcaccia, Tenuta Barcaccia, Rome (4th–5th)
Tablinium in building later forming part of S. Maria Antiqua
Temple of Minerva Medica, Rome
Nymphaeum, Favignana, Sicily
Baths, Piazza Armerina, Sicily
Fountains (two), Piazza Armerina, Sicily

Balkans

Mausolea of Galerius and of Romula, Felix Romuliana (Gamzigrad)

Greece

Basilica D, Amphipolis (4th–7th)
Baths, Corinth
Unknown building, Kardamena, Kos (4th–5th)
Unknown building, Nea Kallikratia, Chalkidiki (4th–6th)
Martyrium, Thessaloniki
The Rotunda (Church of St George), Thessaloniki

Turkey

Building III.5, Anemourion (4th–6th)
Church, Çiftlik (4th–5th)
Hanghaus II, Ephesos
Church, Halil Limani (4th–7th)
Cave church, Meryemlik
Bathhouse, Metropolis
Bath, Frigidarium II, Sagalassos (4th–5th)
Town church, Ura (4th–6th)

Levant

Ashkelon Byzantine church, Barnea district in Ashkelon (4th–7th)
Church of Lazarus, Bethany (4th–5th)
Hall, near Caesarea (4th–7th)
Building 31, Gadara (Umm Qais)
Church of SS. Sergios and Backhos, Umm al-Surab (4th–5th)

North Africa

Baths, now in museum, Tébessa, Algeria (4th–5th)
Fountain, Maison de la Cascade, Utica, Tunisia (4th–5th)
Fountain, Maison du Bassin Figuré, Utica, Tunisia

TYPES OR PROTOTYPES? MOSAICS IN THE FIFTH CENTURY

Total: 77

Italy

Baptistery, Albenga
S. Maria della Croce, Casaranello
S. Giusto, Lucera
S. Vittore in Ciel d'Oro, Milan
Catacomb of S. Gaudioso, Naples
Catacomb of S. Gennaro, Naples
Church of S. Felice, Nola (Cimitile) (5th–6th)
Church of S. Agata Maggiore, Ravenna (5th–6th)
Archbishop's Chapel, Ravenna
Neonian or Orthodox Baptistery, Ravenna
Church of S. Croce, Santa Croce, Ravenna
Ursiana church, Ravenna
'Mausoleum' of Galla Placidia, Ravenna
Catacomb of S. Ermes, Rome
S. Giovanni in Fonte (Lateran Baptistery), Rome
Chapel of St John the Evangelist (Lateran Baptistery) Rome
Chapel of SS. Cyprian and Justina (or SS. Secunda and Rufina) (Lateran Baptistery), Rome
Church of S. Maria Maggiore, Rome
Church of S. Paolo *fuori le mura*, Rome
Church of S. Sabina, Rome
Chapel of S. Matrona, San Prisco (5th–6th)

Balkans

Stobi Palace, Stobi (Gradsko), Macedonia

Greece

Church, Lavreotic Olympus, north of the acropolis of Aigileias (5th–6th)
Basilica A, Amphipolis (5th–6th)
Basilica B, Amphipolis (5th–6th)
Basilica by the Kenchrean Gate, Corinth
Kraneion Basilica, Corinth
Church, Skoutela, Corinth (5th–6th)
Building, Gortyna, Crete (5th–6th)
Ilissos Basilica, Island of Ilissos
Knossos Medical Faculty Basilica, Knossos, Crete
Sanatorium Basilica, Knossos, Crete (5th–6th)
Lechaio Basilica, Lechaio (5th–6th)
Basilica A, Nea Anchialos
Basilica B, Nea Anchialos
Basilica Martyrios, Nea Anchialos
Basilica G, Nea Anchialos, Macedonia (5th–6th)
Basilica B, Nikopolis, Epiros (5th–6th)
Octagonal church complex, Philippi (5th–6th)
Basilica, Louloudies, nr. Pydna, Pieria
Church of the Acheiropoitos, Thessaloniki
Church of St Demetrios, Thessaloniki
Church of Hosios David, Thessaloniki (5th–7th)
Hall in Gounares Street, Thessaloniki (5th–6th)

Cyprus

Church of Hagios Kononas, Paphos (5th–6th)
Church of the Hagioi Pente, Yeroskipou/Geroskipou, Paphos (5th–7th)

Turkey

Akhiza Cathedral, Klarjeti (5th–6th)
Church of the Evangelist, Alahan
Central Church, Anemourion
Necropolis Church, Anemourion
Church of St John of Stoudios, Constantinople
Transept Church, Corycus
Standing Church, Dağpazarı
Church of St Michael, Germia (Yürme) (5th–6th)
Agora Basilica, Melli (Kocaaliler) (5th–6th)
Church 1, Yemiskum (5th–6th)

Levant

Area A Basilica, Abila
Area D Basilica, Abila
Qal'at Sem'an (St Symeon Stylites' church), Aleppo
Church of St Photios, Huarte, Apameia

Basilica of 'Christ casting out demons from men into pigs', Gadara (Umm Qais) (5th–6th)
Church, Kibbutz Shavey Zion near Nahariya, Galilee
Church of the Multiplication of the Loaves and the Fishes, Tabgha, Galilee
Church of the Prophets, Apostles and Martyrs, Gerasa (Jerash)
Church, Zoara, Khirbet esh-Sheik 'Isa (5th–6th)
Central church, Shivta/Sbeita, Negev (5th–7th)
East Church, Elusa, Negev (5th–7th)
Civic complex church, Pella (Tabaqat Fahl)
East Church, Pella (Tabaqat Fahl) (5th–6th)
West Church, Pella (Tabaqat Fahl) (5th–6th)
Aaron's Monastery, Petra
Basilica near to the Temple of the Lions Ailes, Petra
Petra Church, Petra
Church of the Holy Cross, Sergiopolis (Resafa)
Church of the Theotokos, Mount Gerizim, West Bank

North Africa

Church of Theophilos, Abu Mina, Maryut desert, near Alexandria, Egypt
Bathhouse, Sbeitla (Sufetula), Tunisia (5th–6th)

EMPERORS, KINGS, POPES AND BISHOPS: MOSAICS IN THE SIXTH CENTURY

Total: 63

Italy

Chapel of S. Prosdocimus, Padua
Arian Baptistery, Ravenna
Church of S. Apollinare in Classe, Ravenna
Church of S. Apollinare Nuovo, Ravenna
Church of S. Michele in Africisco, Ravenna
Church of S. Severo, Ravenna
Church of S. Vitale, Ravenna
Church of SS. Cosmas and Damian, Rome
Church of S. Lorenzo *fuori le mura*, Rome
Church of S. Teodoro, Rome
Chapel of S. Maria Mater Domini in SS. Fortunatus e Felice, Vicenza

Balkans

Eufrasian Basilica, Poreč, Croatia
Church of S. Maria Formosa, Pula, Croatia
Basilica, Bargala, Štip, Macedonia
Unspecified buildings, Justiniana Prima (Caričin Grad), Serbia

Greece

Basilica C, Amphipolis
Basilica E, Amphipolis (6th–7th)
Basilica A, Nikopolis
Museum Basilica, Philippi
Church of St Demetrios Thessaloniki
House, Thessaloniki

Turkey

Church, Anazarbus (Anavarza)
Cumanin Camii Church, Antalya (6th–7th)
Church of S. Martha, Wondrous Mountain, Antioch
Monastery of St Symeon Stylite the Younger, Wondrous Mountain, Antioch
Church of the Holy Trinity, Wondrous Mountain, Antioch
North Settlement Church, Çanli Kilisse, near Akhisar
Church of Hagia Eirene, Constantinople
Church of Hagia Sophia, Constantinople
Church, now the Kalenderhane Camii, Constantinople
Church of St Polyeuktos, Constantinople
Church of SS. Sergios and Bacchos, Constantinople
Unknown structure, Hadrianopolis (Eskipazar)
Church, the Alacami, Kadirli
Monastery of Mar Gabriel, Kartmin, Tur 'Abdin
Basilica, Sagalassos

Georgia

Jvari Monastery, near Mcxeta, Kartli Province

Levant

Bath, Frigidarium, Androna (al-Andarin)
Bath house, Bet She'an
Church of SS. Sergios, Bacchos and Leontios, Bosra
Octagonal Church, Gadara (Umm Qais)
Church of S. John the Baptist, Gerasa (Jerash)
Church of SS. Peter and Paul, Gerasa (Jerash) (6th–7th)
Propylaea, Gerasa (Jerash)
Church of S. George, Haspin
Church at Arindela, Gharandal
Church, Kasr Ibn Wardan, id-Dabbaghin, near Hama
Church, Khirbat al-Karak, Galilee
Church of Moses, Mount Nebo, Madaba
Church of S. Lazarus, Nahariya, Western Galilee
Ridge church, Petra
Martyrion, Sergiopolis (Resafa) (6th–7th)

Cyprus

Church, Kalavassos, Kopetra (6th–7th)
Church of Panagia Angeloktistos, Kiti
Church, Kourion
Amathous Acropolis Basilica, Limassol
Church of Panagia Kyra, Livadia
Church of Panagia Kanakaria, Lythrankomi
Church at Polis-Chrysouchous, Paphos (6th–7th)

North Africa

Church, Marea, Alexandria, Egypt
Church of St Jeremias, Saqqara, Egypt
Monastery of St Catherine, Sinai, Egypt

Iraq

Palace, Ctesiphon

NEW BEGINNINGS? ISLAM, BYZANTIUM AND ROME: THE SEVENTH AND EIGHTH CENTURIES

Seventh century: 17

Italy

Church of S. Apollinare in Classe, Ravenna
Church of S. Agnese, Rome
Chapel of S. Venantius, Lateran Baptistery, Rome
Church of S. Pietro *in Vincoli*, Rome
Church of S. Stefano Rotondo, Rome
Church of S. Teodoro, Rome

Balkans

Amphitheatre chapel, Dyrrachium (Durrës) (7th–11th)

Greece

Basilica C, Amphipolis
Basilica E, Amphipolis (6th–7th)
Church of St Demetrios, Thessaloniki

Levant

Palace, Khirbet al-Miniya, Galilee (7th–8th)
Church of S. Anna or Anastasia, Jerusalem
Dome of the Rock, Jerusalem

Armenia

Zvartnots Cathedral, Etchmiadzin

Cyprus

Church, Katalymmata ton Plakoton, Kopetra

Georgia

Church, C'romi

North Africa

Main Church, Saqqara

Eighth century: 13

Italy

Triclinium of the Lateran, Rome,
Church of S. Martino ai Monti, Rome (8th–9th)
Church of Old St Peter's, Rome

Greece

Church of Hagia Sophia, Thessaloniki,

Turkey

Church of Hagia Sophia, Constantinople
Church of Hagia Eirene, Constantinople
Church of St Stephen, Fatih Camii, Trilye (Zeytinbagi)

Levant

Palace, Al Qastal
Market place, Bet She'an
Great Mosque, Damascus
Church of St Stephen, Umm al-Rasas, Madaba
Service building, Qusayr 'Amra

Armenia

Church of St Gregory, Dvin, Artašat

MEDIUM AND MESSAGE: MOSAICS IN THE NINTH AND TENTH CENTURIES

Ninth century: 17

France

Theodulf's Oratory, Germigny-des-Prés, Orléans

Italy

Church of S. Ambrogio, Milan
Repairs at Ravenna
Church of S. Cecilia in Trastevere, Rome
Church of S. Marco, Rome
Church of S. Maria in Domnica, Rome
Church of SS. Nereo ed Achilleo, Rome
Church of S. Prassede and its Zeno Chapel, Rome

Greece

Church of Hagia Sophia, Thessaloniki

Turkey

Lower city church, Amorium
Church of Hagia Sophia, Constantinople
Church, Dereağzi (9th–10th)
Church, Mavrokastron-Karahisar, Koloneia (9th–10th)

Iraq

Palace, Samarra

Tenth century: 10

Turkey

Church, now Atık Mustafa Pasha Camii, Constantinople
Church of Christ Chalkites, Constantinople
Church of Hagia Sophia, Constantinople
Church of Myrelaion, Constantinople
Church of Constantine Lips, Theotokos tou Lisbos, Constantinople
Church of St John of Stoudios, Constantinople
Bukoleon Palace, Constantinople
Monastery of Barlaam, Mount Kasios

Spain

Great Mosque, Cordoba,

North Africa

Monastery of St Catherine, Sinai, Egypt

A UNIVERSAL LANGUAGE? ELEVENTH-CENTURY MOSAICS

Total: 19

Italy

Church of S. Maria in the Monastery of S. Nilo, Grottaferrata
Church of S. Maria Assunta, Torcello,
Church of S. Giusto, Trieste
Church of S. Marco, Venice
Cathedral of S. Matteo, Salerno

Greece

Church at Daphni, near Athens
Church of Nea Moni, Chios
Church of Hagioi Theodoroi, Serres
Church of Hosios Loukas, Stiris
Church of Hagia Sophia, Thessaloniki
Vatopedi Monastery, Mount Athos

Ukraine

Church of Hagia Sophia, Kiev

Turkey

Church, now Gül Camii, Constantinople
Church of Hagia Glykeria, Constantinople
Church of Hagia Sophia, Constantinople
Church now Odalar Camii, Constantinople (11th–12th)
Nikaea Church 1, Nikaea (11th–13th)
Nikaea Church 2, Nikaea (11th–13th)

Levant

al-Aqsa Mosque, Jerusalem

INCORRIGIBLY PLURAL: MOSAICS IN THE TWELFTH CENTURY

Total: 33

Germany

Palace Chapel, Aachen

Italy

Church of Santissimo Salvatore, Cefalù
Church of S. Giorgio, Ferrara
Church of S. Maria in the Monastery of S. Nilo, Grottaferrata
Church of S. Maria la Nuova, Monreale
Church of S. Maria and Donato, Murano
Cappella Palatina, Palermo
Palermo Cathedral, Palermo (12th–13th)
Church: La Martorana, Palermo
Palace, La Zisa, Palermo
Palazzo dei Normanni, Palermo
Church of S. Apollinare in Classe, Ravenna
Ursiana Church, Ravenna
Church of S. Bartolomeo all'Isola, Rome
Church of S. Clemente, Rome
Church of S. Maria in Monticelli, Rome
Church of S. Maria in Trastevere, Rome
Church of S. Maria Nova (S. Francesca Romana), Rome
Church of S. Paolo *fuori le mura*, Rome
Church of St Peter's, Rome
Church of S. Marco, Venice

Greece

Church of Theotokos Parthenos, Athens
Vatopedi, Mount Athos

Romania

Bizere Monastery, Bizere (Frumuseni)

Ukraine

Church of S. Michael, Kiev

Georgia

Gelati Monastery, near Kutaisi, Imereti

Turkey

Church of Christ in Chora (Kariye Camii), Constantinople
Church of Hagia Sophia, Constantinople
Pantokrator Monastery (Zeyrek Camii), Constantinople
Church, Kral Kizi, on the western slope of Lake Tasalti (Edirne)

Levant

Church of the Nativity, Bethlehem
al-Nuri Mosque, Homs
Church of the Holy Sepulchre, Jerusalem

MEN AND MOSAICS: THE THIRTEENTH CENTURY

Total: 46

Italy

Castello di Calatamauro, Calatamauro (13th–14th)
Unknown church, Cortona
Church of S. Giovanni (Florence Baptistery), Florence
Church of S. Maria del Fiori, Florence
Church of S. Miniato, Florence (13th–14th)
Church of S. Lorenzo, Genoa
Church of S. Matteo, Genoa
Church of S. Maria, Grottaferrata
Church of S. Frediano, Lucca
Church of S. Gregory, Messina

Church of S. Maria *fuori le mura*, Messina
Church of S. Maria la Nuova, Monreale (13th–14th)
Church of S. Cipriano, Murano (mosaic now in Potsdam)
Church of S. Crisogono, Rome
The Lateran Basilica (S. Giovanni), Rome
Church of S. Lorenzo *fuori le mura*, Rome
Church of S. Maria in Trastevere, Rome
Church of S. Maria Maggiore, Rome
Church of S. Paolo *fuori le mura*, Rome
St Peter's, Rome
Sancta Sanctorum, Rome
Church of S. Tommaso *in Formis*, Rome
Church of S. Matteo, Salerno
Church of S. Maria Assunta, Spoleto
Church of S. Giusto, Trieste
Church of S. Marco, Venice

Greece

Church of Panagia Parigoritissa, Arta
Church of Porta Panagia, Pyli

Turkey

Esrefoglu Camii Mosque, Beysehir
Church of Hagia Sophia, Constantinople
Church of the Theotokos Panagiotissa, also known as the Theotokos Panagia Mougliotissa, Constantinople
Church of Constantine Lips, Constantinople (13th–14th)
Church, now Kalenderhane Camii, Constantinople
Artuqid Palace, Diyarbakır
Church E, Sardis
Church of Theotokos Chrysokephalos, Trebizond (Trabzon)

Levant

Great Mosque, Damascus (restorations)
Mausoleum of Baybars (Madrasa al-Zahiriyya), Damascus
Dome of the Chain (Qubbat al-Silsila), Jerusalem
Dome of the Rock, Jerusalem (restorations)
Burtasiyya Mosque, Tripoli

North Africa

Bahri Mamluk Reception Hall, Cairo
Madrasa of Sultan al-Mansur Qalawun, Cairo
Mausoleum of Shajarat al-Durr, Cairo
Mausoleum of al-Salih Najm al-Din Ayyub, Cairo
Ibn Tulun Mosque, Cairo

BOOM AND BUST: THE FOURTEENTH AND FIFTEENTH CENTURIES

Fourteenth century: 31

Italy

Church of S. Andrea, Amalfi
Anagni Cathedral, Anagni
Old Cathedral, Arezzo
Church of S. Giovanni (Florence Baptistery), Florence
Church of S. Miniato, Florence
Church of S. Martino, Lucca
Church of S. Maria Assunta, Messina
Chapel of Maria del Principio, Naples
Church of S. Maria, Orvieto
Church of S. Maria Assunta, Pisa (14th–15th)
Church of S. Paolo *fuori le mura*, Rome
St Peter's, Rome
Church of S. Marco, Venice

Greece

Church of the Holy Apostles, Thessaloniki

Church, 18 rue des Armatoles, Thessaloniki
Vatopedi, Mount Athos

Turkey

Church of Christ in Chora (Kariye Camii), Constantinople
Hagia Sophia, Constantinople
Church of Theotokos Pammakaristos (Fethiye Camii), Constantinople
Church, now Vefa Kilise Camii, Constantinople

Levant

Mausoleum of Emir Tankiz al-Nasiri, Damascus
Palace of Tankiz, Damascus
Ibrahimi Mosque, Hebron, West Bank
Madrasa of Tankiz, Jerusalem
Burtasiyya Mosque, Tripoli

North Africa

Madrasa of the Emir Sayf al-Din Aqbugha (White Ox), Cairo
Madrasa of Emir Taybars/Taybarsiyya Madrasa, Cairo
al-Maridani Mosque, Cairo
Sitt Hadaq Mosque, Cairo

Other

Aq-Saray Palace (Palace of Tamerlane), Shahrisabz, Uzbekistan
S. Vitus Church, Prague, Czech Republic

Fifteenth century: 5

Italy

Church of S. Giovanni (Florence Baptistery), Florence
Church of S. Croce in Gerusalemme, Rome
Church of S. Maria, Siena
Church of S. Marco, Venice

Greece

Church of the Virgin Pege, Pikouliana

NOTES

INTRODUCTION

1. A. Cutler, 'The industries of art', *EHB*, vol. 2, 555–87, touches on several issues developed here.
2. For Torcello, see I. Andreescu-Treadgold's summary of her extensive but sadly largely unpublished corpus for wall mosaics in the north Adriatic area in 'The mosaics of Venice and the Venetian lagoon: thirty-five years of research at Torcello (I)', *Arte medievale* 3 (2013), 193–206; though see I. Andreescu-Treadgold, 'Il corpus dei mosaici parietali nella zona nord Adriatica e la campionatura delle tessere vitree del III registro della parete ovest a S. Maria Assunta di Torcello I', in ed. C. Angelilli, *AISCOM* 9 (Ravenna, 2004), 175–90, and I. Andreescu-Treadgold, 'Il corpus dei mosaici parietali nella zona nord Adriatica e la campionatura delle tessere vitree del III registro della parete ovest a S. Maria Assunta di Torcello (II): gli altri registri', in ed. C. Angelilli, *AISCOM* 10 (Rome, 2005), 617–36. For S. Marco, O. Demus, *The Mosaics of San Marco in Venice*, 2 vols. in 4 (Chicago, 1984). For Sicily, for example, O. Demus, *The Mosaics of Norman Sicily* (London, 1949); E. Kitzinger, *The Mosaics of St. Mary's of the Admiral in Palermo* (Washington, DC, 1990); ed. B. Brenk, *La Cappella Palatina a Palermo* (Modena, 2010). For Poreč, A. Terry and H. Maguire, *Dynamic Splendor: The Wall Mosaics in the Cathedral of Eufrasius at Poreč* (Philadelphia, 2007). The *Mirabilia Italiae* series contains several volumes dealing with monuments with medieval mosaics: ed. P. Angiolini Martinelli, *La Basilica di San Vitale a Ravenna* (Modena, 1997); ed. C. Rizzardi, *Il mausoleo di Galla Placidia a Ravenna* (Modena, 1996). For the Greek churches, D. Mouriki, *The Mosaics of Nea Moni on Chios* (Athens, 1985); N. Chatzidakis, *Hosios Loukas: Byzantine Art in Greece* (Athens, 1997 in English); G. Millet, *Le monastère de Daphni: histoire, architecture, mosaïques* (Paris, 1899).
3. For Thessaloniki, see ed. C. Bakirtzis, E. Kourkoutidou-Nikolaidoli and C. Mavropoulou-Tsioumi, *Mosaics of Thessaloniki: 4th to 14th Century* (Athens, 2012). For Rome, G. Matthiae, *Mosaici medioevali delle chiese di Roma*, 2 vols. (Rome, 1967); W. F. Oakeshott, *The Mosaics of Rome: From the Third to the Fourteenth Centuries* (New York, 1967). Most recently, M. Andaloro and S. Romano, *La pittura medievale a Roma, 312–1431* (Rome, 2006–), of which vols. 1, 4 and 5 have so far been published, will provide a full corpus of mosaics and paintings from Rome. A. Frolow, 'La mosaïque murale byzantine', *Byzantinoslavica* 12 (1951), 180–209, is the first attempt I am aware of to consider mosaics across the medieval world.
4. A. H. S. Megaw and E. J. W. Hawkins, *The Church of the Panagia Kanakariá at Lythrankomi in Cyprus: Its Mosaics and Frescoes* (Washington, DC, 1977); D. Mouriki, *The Mosaics of Nea Moni on Chios* (Athens, 1985); Terry and Maguire, *Dynamic Splendor*; not enough of this sort of work has been published for the mosaics of S. Marco or Sicily or Rome. Much important material relates to the conservation of the mosaics of Ravenna: for example, eds. A. M. Iannucci, C. Fiori and C. Muscolino, *Mosaici a S. Vitale e altri restauri: il*

restauro in situ di mosaici parietali (Ravenna, 1992); eds. C. Muscolino, A. Ranaldi and C. Tedeschi, *Il Battistero Neoniano: uno sguardo attraverso il restauro* (Ravenna, 2011); ed. C. Muscolino, *Sant'Apollinare Nuovo: un cantiere essemplare* (Ravenna, 2012).

5. As Irina Andreescu-Treadgold has rightly pointed out on numerous occasions.
6. For the Rotunda, see ed. Bakirtzis, *Mosaics of Thessaloniki*, 51–127; for Durrës, K. Bowes and J. Mitchell, 'The main chapel of the Durrës amphitheatre', *Mélanges d'archéologie et d'histoire de l'École française de Rome, antiquité* 121, 2 (2009), 571–97.
7. www.sussex.ac.uk/byzantine/mosaic/ an open-access site established through a Leverhulme International Network Grant. The database was built by Bente Bjørnholt.
8. As expressed by A. Cutler, 'Under the sign of the Deēsis: on the question of representativeness in medieval art and literature', *DOP* 41 (1987), 154, in another context.
9. K. Weitzmann, 'The mosaic in St. Catherine's monastery on Mount Sinai', *Proceedings of the American Philosophical Society* 110 (1966), 392–405, at 405; Weitzmann's grandiose claim glosses over the fact that the mosaics of Damascus, Toledo, Kiev, Norman Sicily and Venice all postdate the Sinai mosaic by at least two hundred years, and so offer no evidence whatsoever for sixth-century Constantinopolitan mosaic-making.
10. E. Diez and O. Demus, *Byzantine Mosaics in Greece: Hosios Lucas and Daphni* (Cambridge, Mass., 1931), 31, 42.
11. N. Rabbat, 'The mosaics of the Qubba al-Zahiriyya in Damascus: a classical Syrian medium acquires a Mamluk signature', *Aram* 9–10 (1997–98), 227–39, at 227.
12. From A. Iacobini's 'Introduzione' to the second part of *Arte medievale* 3 (2013), 185–192. 'National art' comes in the English summary at 192, but note, for example, 'il *know-how* degli artisti bizantini' at 185.
13. G. Kühnel, 'Between Jerusalem and Bethlehem: the dating of a newly recovered tessera of Crusader mosaic decoration', *Jewish Art* 23/24 (1997/98), 151–7, at 155. These are perspectives taken of other art forms, as discussions of the wall paintings in the church of S. Maria Antiqua in Rome and the hypothetical contributions of Byzantine wall painters demonstrate. These are views that assume that a Hellenistic style (however defined) was only possible in Constantinople; that Constantinople had a dominating cultural authority; and that people in other places were acutely aware of what was in Constantinople.
14. Demus, *The Mosaics of San Marco*, vol. 2, 7 for Greek and 16 for the young Venetian.
15. *Ibid.* 18–20. The panel is 12 × 4 metres, so in this model would have been made very slowly (see the discussion in Chapter 2). Demus is used as something of a straw man, and I apologise for this, but it is an inevitable result of his enormous influence on mosaic studies. What he argued was perfectly rational in his terms but these are terms that need challenging. An important critique is that of S. Sinding-Larsen, 'A walk with Otto Demus. The mosaics of San Marco, Venice and art-historical analysis', *ActaNorv* 8 (1992), 145–205.
16. Demus, *The Mosaics of San Marco*, vol. 2, 13 and 17.
17. *Ibid.* 9.
18. See, for example, the terms used by Demus, *The Mosaics of Norman Sicily*, part III, 'The development of style'. For issues with style, see the evaluation of E. Marlowe, *Shaky Ground: Context, Connoisseurship and the History of Roman Art* (London, 2013). It is worth remarking how much the description and analysis of style focus on the presentation of the body, bracketed by the twin high points in this respect of Classicism and Renaissance.
19. See *The Mosaics of San Marco* and also Kitzinger, *Mosaics of St. Mary's of the Admiral*, as another example.
20. On shifting 'Roman' identities, see eds. W. Pohl and G. Heydemann, *Post-Roman Transitions: Christian and Barbarian Identity in the Early Medieval West* (Turnhout, 2013). For debates about being Byzantine, see ed. H. Ahrweiler and A. Laiou, *Studies on the Internal Diaspora of the Byzantine Empire* (Washington, DC, 1998); G. Page, *Being Byzantine: Greek Identity before the Ottomans* (Cambridge, 2008); on the Romanness of the Byzantines, A. Kaldellis, *Ethnography after Antiquity* (Philadelphia, 2013) and A. Kaldellis, *The Byzantine Republic: People and Power in New Rome* (Cambridge, Mass., 2015).
21. As L. Safran, *The Medieval Salento: Art and Identity in Southern Italy* (Philadelphia, 2014), makes very clear, e.g. 3–5, 212, 235–8.
22. See P. J. Nordhagen, 'The mosaics of John VII (705–707 AD). The mosaic fragments and their technique', *ActaNorv* 2 (1965), 121–66; B. Brenk, 'Zum Bildprogramm der Zenokapelle in Rom', *Archivio español de arqueología* 45–47 (1972–74), 213–22; Oakeshott, *The Mosaics of Rome*, 156; M. Asmussen, 'The Chapel of S. Zeno in S. Prassede in Rome: new aspects on the iconography', *Analecta Romana Instituti Danici* 25 (1986), 67–87. G. Mackie, 'The San Zeno Chapel: a prayer for salvation', *Papers of the British School at Rome* 57 (1989), 172–99, at 192–5, outlines the 'Byzantine' aspects of the iconography, associating them with Demus' classical system, and suggests artist-monks fleeing Iconoclasm were responsible.
23. See Oakeshott, *The Mosaics of Rome*, 296; J. Gardner, *The Roman Crucible: The Artistic Patronage of the Papacy, 1198–1304* (Munich, 2013), 223.
24. Gardner, *The Roman Crucible*, 329 and 383, on patrons transcending international boundaries.
25. For Dandolo's Zen Chapel, see P. J. Nordhagen, 'Byzantium and the West, with some remarks on the activity of Greek mosaic artists in Italy in the fourteenth century', originally published in ed. R. Zeitler, *Les pays du Scandinavie et Byzance* (Uppsala, 1981), 34–51, and reprinted in P. J. Nordhagen, *Studies in Byzantine and Early Medieval Painting* (London, 1990), at 480. For Cavallini, Nordhagen, 'Byzantium and the West', 481–3.
26. Demus, *The Mosaics of San Marco*, vol. 1, 3–4 and 291–2 and vol. 2, 216; O. Demus, *The Church of San Marco in*

Venice: History, Architecture, Sculpture (Washington, DC, 1960), 26.

27. Demus, *The Mosaics of San Marco*, vol. 2, 215–18.
28. See L. James, 'Mosaic matters. Questions of manufacturing and mosaicists in the mosaics of San Marco, Venice', in eds. H. Maguire and R. S. Nelson, *San Marco, Byzantium and the Myths of Venice* (Washington, DC, 2010), 227–43.
29. See C. L. Striker and Y. Doğan Kuban, 'Work at Kalenderhane Camii in Istanbul: third and fourth preliminary reports', *DOP* 25 (1971), 251–8, at 256, and then eds. C. Striker and Y. Doğan Kuban, *Kalenderhane in Istanbul: The Buildings, their History, Architecture, and Decoration: Final Reports on the Archaeological Exploration and Restoration at Kalenderhane Camii, 1966–1978* (Mainz, 1997), 124.
30. See Oakeshott, *The Mosaics of Rome*, 244.
31. L. Brubaker, 'Material culture and the myth of Byzantium, 750–950', in eds. G. Arnaldi and G. Cavallo, *Europa medieval e mondo bizantino* (Rome, 1997); A. Cutler, 'From loot to scholarship: changing modes in the Italian response to Byzantine artifacts, ca 1200–1750', *DOP* 49 (1995), 237–67.
32. For enamels as going West to East, see D. Buckton, 'Byzantine enamel and the west', *Byzantinische Forschungen* 13 (1988), 235–44, and I. C. Freestone, C. P. Stapleton and V. Rigby, 'The production of red glass and enamel in the Late Iron Age, Roman and Byzantine periods', in ed. C. Entwistle, *Through a Glass Brightly: Studies in Byzantine and Medieval Art and Archaeology presented to David Buckton* (Oxford, 2003), 142–54; for manuscripts, L. Brubaker, 'The introduction of painted initials in Byzantium', *Scriptorium* 45 (1991), 22–46. A. Cutler, 'Byzantine art and the north: meditations on the notion of influence', in ed. K. Fledelius, *Byzantium: Identity, Image, Influence. XIXth International Congress of Byzantine Studies, Major Papers* (Copenhagen, 1996), 169–82.
33. On centres and peripheries, M. Rowlands, 'Centre and periphery: a review of a concept', in ed. M. Rowlands, *Centre and Periphery in the Ancient World* (Cambridge, 1987), 1–11.
34. Weitzmann, 'The mosaic in St. Catherine's monastery', 405.
35. Kühnel, 'Between Jerusalem and Bethlehem', 155.
36. Demus, *The Mosaics of Norman Sicily*, 443: matters improved during phase 3 when William II went back to Greek artists of the 'new late Comnenian school'.
37. Kitzinger, 'Byzantine contribution to Western art'. Also see the line taken by O. Demus, *Byzantine Art and the West* (New York, 1970).
38. C. R. Morey, 'A note of the date of the mosaics of Hosios David, Salonica', *Byzantion* 7 (1932), 339–46.
39. R. S. Cormack, *Painting the Soul* (London, 1997), 168. A. Cutler, 'La "questione bizantina" nella pittura italiana: una vision alternative della "maniera greca"'. in ed. C. Bertelli, *La pittura in Italia* (Milan, 1994), 335–54 and republished as Study 9 in A. Cutler, *Byzantium, Italy and the North: Papers on Cultural Relations* (London, 2000), 190–226 and A. Cutler, 'Misapprehensions and misgivings: Byzantine art and the west in the twelfth and thirteenth centuries', *Medievalia* 7 (1981), 41–77 and republished as Study 17 in Cutler, *Byzantium, Italy*, 74–510.
40. By E. Kitzinger, 'The Hellenistic heritage in Byzantine art', *DOP* 17 (1963), 95–115 and 'The Hellenistic heritage in Byzantine art reconsidered', *Jahrbuch der Österreichischen Byzantinistik* 31 (1981), 637–75.
41. With crucial exceptions at Torcello, Poreč, and through the work of Ernest Hawkins and David Winfield. For an appreciation of Ernest Hawkins, see R. Cormack, 'The talented Mr Hawkins', in eds. H. A. Klein, R. G. Ousterhout and B. Pitarakis, *Kariye Camii yeniden/The Kariye Camii Reconsidered* (Istanbul, 2011), 499–510 and also the transcript of the interview given by Robin Cormack as part of the Dumbarton Oaks Oral History project (www.doaks.org/library-archives/dumbarton-oaks-archives/oral-history-project/robin-sinclair-cormack). For David Winfield, see Antony Eastmond's appreciation, 'David Winfield', *DOP* 68 (2015), 2–7.
42. See the analysis of P. Brown, 'Eastern and Western Christendom in Late Antiquity: a parting of the ways', in P. Brown, *Society and the Holy in Late Antiquity* (London, 1982), 166–95.
43. P. L. Rubin, *Giorgio Vasari: Art and History* (New Haven, 1995).
44. G. Vasari, *Le vite de'più eccellenti pittori, scultori e architettori*, Preface: for the text see G. Milanesi, *Le opere di Giorgio Vasari con nuove annotazione e commenti* (Florence, 1906, reprinted Florence, 1998), vol. 1, 166–90. English tr. in G. Bull, *Giorgio Vasari: The Lives of the Artists, a Selection* (London, 1965), 46.
45. See, for example, E. Kitzinger, 'The Byzantine contribution to Western art of the twelfth and thirteenth centuries', *DOP* 20 (1966), 25–47. This article appears to start from the perspective of Byzantine art as a milestone on the way to something else, implicitly better, and is underpinned by language and notions of quality/achievement defined by late medieval/Early Renaissance art on the one hand and Classical art on the other, so that it oscillates, if only implicitly, between these two touchstones of achievement and assumptions about what they considered important. Even as he tries to challenge it, it seems impossible for Kitzinger to detach himself from a (Vasarian) idea of the supremacy of the Renaissance and Classical antiquity. For discussion of the problems implicit in this, see also A. Cutler, 'The pathos of distance: Byzantium in the gaze of Renaissance Europe and modern scholarship', in ed. C. Farago, *Reframing the Renaissance: Visual Culture in Europe and Latin America, 1450–1650* (New Haven, 1995), 23–46. As M. Rampley, *The Vienna School of Art History: Empire and the Politics of Scholarship 1847–1918* (Philadelphia, 2013), shows, Hegel too hated Byzantine art. Consequently, within the traditions of nineteenth-century German scholarship and art history (in which scholars like Demus and Kitzinger

were trained), Byzantium was not rated highly. On these themes, see also J. Osborne, 'The artistic culture of early medieval Rome: a research agenda for the twenty-first century', in *Roma nell'alto medioevo, Settimana di Studi del Centro di studi sull'alto medioeve*, 2 vols. (Spoleto, 2001), 693–711.

46. Iacobini, 'Introduzione', 185 and 192.
47. This is what Kitzinger said he wanted to do in his 1949 article, 'The mosaics of the Cappella Palatina in Palermo: an essay on the choice and arrangement of subjects', *Art Bulletin* 31 (1949), 269–92. If the Martorana were a Byzantine church, then it could be used as a source for Byzantine churches in the twelfth century.
48. O. Demus, 'The role of Byzantine art in Europe', in *Byzantine Art: An European Art* (Athens, 1964), 109: 'these [mosaics] give the impression that there must have existed others of almost unimaginable grandeur'.
49. A. Cutler, 'The matter of ivory and the movement of ideas: thoughts on some Christian diptychs of Late Antiquity', in ed. H. G. Meredith, *Objects in Motion: The Circulation of Religion and Sacred Objects in the Late Antique and Byzantine World* (Oxford, 2011), 57–72.
50. See M. Baxandall, *Patterns of Intention: On the Historical Explanation of Pictures* (New Haven, 1985), attacking the concept of 'artistic influence' as too easy and too lazy.
51. Safran, *Medieval Salento*.

INTRODUCTION TO PART I

1. Discussions include A. Cutler, 'The industries of art', *EHB*, vol. 2, 557–61, and the discussions in M. Mundell Mango and J. Henderson, 'Glass at medieval Constantinople: preliminary scientific evidence', in eds. G. Dagron and C. Mango, *Constantinople and its Hinterland* (Aldershot, 1995), 333–58, and I. Andreescu-Treadgold and J. Henderson with M. Roe, 'Glass from the mosaics on the west wall of Torcello's basilica', *Arte medievale* 5 (2006), 87–141; L. James, 'Byzantine glass mosaic tesserae: some material considerations', *Byzantine and Modern Greek Studies* 30.1 (2006), 29–47.
2. O. Demus, *The Mosaics of San Marco in Venice*, 2 vols. in 4 (Chicago, 1984), vol. 1, 2; also see the arguments in L. James, 'Mosaic matters: questions of manufacturing and mosaicists in the mosaics of San Marco, Venice', in eds. H. Maguire and R. S. Nelson, *San Marco, Byzantium and the Myths of Venice* (Washington, DC, 2010), 227–44. V. François and J.-M. Spieser, 'Pottery and glass in Byzantium', *EHB*, vol. 2, 594–5, tend to assume that glass was made in Byzantium and then made into tesserae, probably by the same people.
3. G. Davidson Weinberg, 'A medieval mystery: Byzantine glass production', *Journal of Glass Studies* 27 (1975), 127–41; also see J. Philippe, 'Reflections on Byzantine glass', in *First International Anatolian Glass Symposium 1989* (Istanbul, 1990), 40–6.
4. I. Andreescu, 'The corpus for wall mosaics in the north Adriatic area', *Bulletin d'information de l'Association internationale pour l'étude de la mosaïque antique* 7 (1978), 317–23, sets out her methodologies for understanding these issues in describing how mosaics were entered into the corpus.
5. J. DeLaine, *The Baths of Caracalla in Rome: A Study in the Design, Construction and Economics of Large-Scale Building Projects in Imperial Rome* (Portsmouth, RI, 1997).

1 MAKING GLASS TESSERAE

1. The archangel (he is actually Gabriel) is described by C. Mango and E. J. W. Hawkins, 'The apse mosaics of St. Sophia at Istanbul. Report on work carried out in 1964', *DOP* 19 (1965), 127–31.
2. K. M. Dunbabin, *Mosaics of the Greek and Roman World* (Cambridge, 1999), 280.
3. Mango and Hawkins, 'The apse mosaics of St. Sophia', 131.
4. By Thomas Whittemore, discussing the panel depicting the Empress Zoe in Hagia Sophia in his *The Mosaics of Haghia Sophia at Istanbul: Third Preliminary Report: Work Done in 1935–1938: The Imperial Portraits of the South Gallery* (Oxford, 1929), 14. On the significance of pearls, see F. B. Flood, *The Great Mosque of Damascus: Studies in the Makings of an Umayyad Visual Culture* (Leiden, 2001), notably in chapter 2.
5. J. Henderson, *The Science and Archaeology of Materials* (London, 2000), 24–108, on glass is a valuable introduction. For mosaics and their glass, M. Verità, 'Tecniche di fabbricazione dei materiali musvivi vitrei. Indagini chimiche e mineralogiche', in eds. E. Borsook, F. Gioffredi Superbi and G. Pagliarulo, *Medieval Mosaics: Light, Color, Materials* (Milan, 2000), 47–64; M. Verità, 'Mosaico vitreo e smalti: la tecnica, i materiali, il degrado, la conservazione', in ed. C. Moldi Ravenna, *I colori della luce* (Venice, 1996), 61–86; M.-D. Nenna, 'Production et commerce du verre à l'époque impériale: nouvelles découvertes et problématiques', *Facta* 1 (2007), 125–48. These are all very useful introductions.
6. I. C. Freestone, M. Ponting and M. J. Hughes, 'The origins of Byzantine glass from Maroni Petrera, Cyprus', *Archaeometry* 44 (2002) 257–72.
7. It is also possible that the sand itself benefited from extra treatment, washing and sieving to remove some impurities, grinding to improve the melt, adding extra shell. Fritting also may have taken place as a part of the procedure, adding another layer of complexity: see Henderson, *Science and Archaeology*, 38.
8. For why trona-rich deposits work best for glass-making, see the incredibly useful article by I. Freestone, 'Glass production in Late Antiquity and the Early Islamic period: a geochemical perspective', in eds. M. Maggetti and B. Messiga, *Geomaterials in Cultural Heritage* (London, 2006), 201–16. Also A. Shortland, L. Schachner, I. Freestone and M. Tite, 'Natron as a flux in the early vitreous materials industry:

sources, beginnings and reasons for decline', *Journal of Archaeological Science* 33 (2006), 521–30. Other sources include Lake Van in Turkey and Lake Pikrolimni in Macedonia, but the Wadi seems to have been far and away the dominant source for natron.

9. J. Barrera and B. Velde, 'A study of French medieval glass composition', *Journal of Glass Studies* 31 (1989), 48–54.
10. Plant ash glass can also have coherent compositional production groups, though these are more complex to understand: C. M. Jackson and J. W. Smedley, 'Medieval and post-medieval glass technology: melting characteristics of some glasses melted from vegetable ash and sand mixtures', *Glass Technology* 45 (2004), 36–42; C. M. Jackson, C. A. Booth and J. Smedley, 'Glass by design? Raw materials, recipes and compositional data', *Archaeometry* 47 (2005), 781–95; Y. Barkoudah and J. Henderson, 'Plant ashes from Syria and the manufacture of ancient glass: ethnographic and scientific aspects', *Journal of Glass Studies* 48 (2006), 297–321; Freestone, 'Glass production in Late Antiquity', 212.
11. I. C. Freestone, Y. Gorin-Rosen and M. J. Hughes, 'Primary glass from Israel and the production of glass in Late Antiquity and the early Islamic period', in ed. M.-D. Nenna, *La route du verre: ateliers primaires et secondaires de verriers du second millénaire av. J.-C. au moyen âge* (Lyons, 2000), 67.
12. I. C. Freestone, K. A. Leslie, M. Thirlwall and Y. Gorin-Rosen, 'Strontium isotopes in the investigation of early glass production: Byzantine and early Islamic glass from the Near East', *Archaeometry* 45 (2003), 19–32.
13. Freestone, 'Glass production in Late Antiquity' for suggestions of quantity of natron to sand.
14. I. C. Freestone, 'Composition and affinities of glass from the furnaces on the Island Site, Tyre', *Journal of Glass Studies* 44 (2002), 67–77.
15. Shortland et al., 'Natron as a flux'; D. Whitehouse, 'The transition from natron to plant ash in the Levant', *Journal of Glass Studies* 44 (2002), 193–6. On the types of plants, Barkoudah and Henderson, 'Plant ashes from Syria'.
16. See M.-D. Nenna, M. Picon and M. Vichy, 'Ateliers primaire et secondaires en Egypte à l'époque gréco-romaine', in ed. Nenna, *La route du verre*, 97–112; M.-D. Nenna, M. Picon, V. Thirion-Merle and M. Vichy, 'Ateliers primaires du Wadi Natrun: nouvelles découvertes', in *Annales du 16e Congrès de l'Association internationale pour l'histoire du verre* (Nottingham, 2005), 59–63.
17. P. Mirti, M. Pace, M. M. Negro Ponzi and M. Aceto, 'ICP–MS analysis of glass fragments of Parthian and Sasanian epoch from Seleucia and Veh Ardaš'r (Central Iraq)', *Archaeometry* 50 (2008), 429–50.
18. S. Grieff and S. Hartmann, '"Wer Kriegt was?": Untersuchungen zur verbreitung Spätantike und frühmittelalterlicher Glasgruppen in Europa und dem Mediterraneum anhand von Fallbeispeielen', in eds. A. Hauptmann, O. Mecking and M. Prange, *Archaometrie und Denkmalpflege 2013* (Bochum, 2013), 251–5.
19. C. Lightfoot, 'The Early Roman glass industry', in eds. D. Foy and M.-D. Nenna, *Échanges et commerce du verre dans le monde antique. Actes du colloque de l'AFAV, Aix-en-Provence et Marseille, 7–9 juin 2001* (Montagnac, 2003), 6. E. M. Stern, 'Roman glassblowing in a cultural context', *American Journal of Archaeology* 103 (1999), 441–84.
20. On these considerations, C. Wickham, *Framing the Early Middle Ages: Europe and the Mediterranean, 400–800* (Oxford, 2005), ch. 11, 693–824; M. McCormick, 'Movements and markets in the first millennium. Information, containers and shipwrecks', in eds. C. Morrisson and A. Laiou, *Trade and Markets in Byzantium* (Washington, DC, 2012), 51–98.
21. Pliny, *Natural History* 1, 65. The literary sources on Classical glass are collected in M. L. Trowbridge, *Philological Studies in Ancient Glass*, University of Illinois Studies in Language and Literature 13 (Urbana, 1928), 231–436. On the symbolism of glass in the Classical world see F. Dell'Acqua Boyvadaoğlu, 'Between nature and artifice: "Transparent streams of new liquid"', *RES* 53/54 (2008), 93–103.
22. Strabo, *Geographica* 16, 2, 25, tr. D. W. Roller, *The Geography of Strabo* (Cambridge, 2012), said there were three main areas of glass production in his day: Syria-Palestine; Egypt, near Alexandria; and Italy. Also see the discussion in A. Silvestri, G. Molin, G. Salviulo and R. Schievenin, 'Sand for Roman glass production: an experimental and philological study on source of supply', *Archaeometry* 48 (2006), 415–32.
23. See Y. Gorin-Rosen, 'The ancient glass industry in Israel: summary of the finds and new discoveries', in ed. Nenna, *La route du verre*, 49–64; M.-D. Nenna, M. Picon and M. Vichy, 'Ateliers primaires et secondaires en Egypte à l'époque gréco-romaine', in ed. Nenna, *La route du verre*, 97–112. Also see I. C. Freestone, R. Greenwood and Y. Gorin-Rosen, 'Byzantine and Early Islamic glassmaking in the eastern Mediterranean: production and distribution of primary glass', in ed. G. Kordas, *Hyalos, Vitrum, Glass: History, Technology and Conservation of Glass and Vitreous Matter in the Hellenic World* (Athens, 2002), 167–74.
24. M.-D. Nenna, 'Primary glass workshops in Graeco-Roman Egypt: preliminary report on the excavations of the site of Beni Salama, Wadi Natrun (2003, 2005–2009)', in eds. I. M. Freestone, J. Bailey and C. M. Jackson, *Glass in the Roman Empire, in Honour of Jennifer Price* (Oxford, 2015), 1–22; M.-D. Nenna, 'Production et commerce du verre à l'époque impériale: nouvelles découvertes et problématiques', *Facta* 1 (2007), 125–48.
25. Freestone et al., 'Primary glass from Israel', 67.
26. F. Aldsworth, G. Haggerty, S. Jennings and D. Whitehouse, 'Medieval glass making at Tyre', *Journal of Glass Studies* 44 (2002), 49–66, and Freestone, 'Composition and affinities'.
27. I. C. Freestone and Y. Gorin-Rosen, 'The great glass slab at Bet She'arim, Israel: an early Islamic glassmaking experiment?', *Journal of Glass Studies* 41 (1999), 105–16. Apollonia is a similar site: O. Tal, R. E. Jackson-Tal and I. C. Freestone, 'New evidence of the production of

raw glass at Late Byzantine Apollonia-Arsuf, Israel', *Journal of Glass Studies* 46 (2004), 51–66.

28. I take 1.5 g as the average weight from DeLaine, *Baths of Caracalla*. Published weights of medieval tesserae support this as an average.
29. Aldsworth et al., 'Medieval glassmaking', 63.
30. D. Foy, 'Technologie, géographie, économie: les ateliers de verriers primaires et secondaires en Occident. Esquisse d'une évolution de l'antiquité au moyen âge', in ed. Nenna, *La route du verre*, 147–70; D. Foy, 'Les apports de verres de Méditerranée orientale, en Gaule méridionale aux IV et V siècles avant J-C', in eds. K. Janssens et al., *Annales du 17e Congrès de l'Association internationale pour l'histoire du verre* (Antwerp, 2009), 121–9; Freestone, 'Glass production in Late Antiquity'; S. Wolf, C. M. Kessler, W. B. Stern and Y. Gerber, 'The composition and manufacture of early medieval coloured window glass from Sion', *Archaeometry* 47 (2005), 361–80; D. Foy, M. Picon, M. Vichy and V. Thirion-Merle, 'Caractérisation des verres de la fin d'antiquité en Méditerranée occidentale: l'émergence de nouveaux courants commerciaux', in eds. Foy and Nenna, *Échanges et commerce*, 41–85; M.-D. Nenna, 'Egyptian glass abroad: HIMT glass and its markets', in eds. D. Keller, J. Price and C. Jackson, *Neighbours and Successors of Rome: Traditions of Glass Production and Use in Europe and the Middle East in the Later 1st Millennium AD* (Oxford, 2014), 177–93.
31. J. Henderson, 'Glass trade and chemical analysis: a possible model for Islamic glass production', in eds. Foy and Nenna, *Échanges et commerce*, 109–23; Barkoudah and Henderson, 'Plant ashes from Syria'.
32. Henderson, 'Glass trade and chemical analysis'; J. Henderson, 'Archaeological and scientific evidence for the production of early Islamic glass at al-Raqqa, Syria', *Levant* 31 (1999), 225–40; J. Henderson, K. Challis, S. O'Hara, S. McLoughlin, A. Gardner and G. Priestnall, 'Experiment and innovation: early Islamic industry at al-Raqqa, Syria', *Antiquity* 79 (2005), 130–45.
33. Tyre: S. Carboni, G. Lacerenza and D. Whitehouse, 'Glassmaking in medieval Tyre: the written evidence', *Journal of Glass Studies* 45 (2003), 141–4, showing that in 1011 glass was still being made at Tyre. Sepphoris: A. Fischer and W. P. McCray, 'Glass production activities as practised at Sepphoris, Israel (37 BC–AD 1516)', *Journal of Archaeological Science* 26 (1999), 893–905. For Samarra, see A. Northedge, 'An interpretation of the Palace of the Caliph at Samarra (Dar al-Khilafa or Jawsaq al-Khaqani)', *Ars Orientalis* 23 (1993), 143–70; Barkoudah and Henderson, 'Plant ashes from Syria', 299–300. This supports arguments from other fields that wars in the Islamic world had little effect on trade: see Henderson, 'Glass trade and chemical analysis', 120. M. Tite et al., 'Revisiting the beginnings of tin-opacified Islamic glazes', *Journal of Archaeological Science* 57 (2015), 80–91, explains the use of lead stannate in glazes as a transfer from contemporary ninth-century Islamic glassmakers continuing older (Byzantine) traditions of glass-making in Egypt and Syria.
34. Barkoudah and Henderson, 'Plant ashes from Syria', 299–300.
35. Henderson, 'Glass trade and chemical analysis'.
36. I. Andreescu-Treadgold and J. Henderson with M. Roe, 'Glass from the mosaics on the west wall of Torcello's Basilica', *Arte medievale* 5 (2006), 87–141; R. Arletti, C. Fiori and M. Vandini, 'A study of glass tesserae from mosaics in the monasteries of Daphni and Hosios Loukas (Greece)', *Archaeometry* 52 (2010), 796–815; A. Silvestri and A. Marcante, 'The glass of Nogara (Verona): a "window" on production technology of mid-medieval times in northern Italy', *Journal of Archaeological Science* 38 (2011), 2509–22, show a similar use of recycled glass and gradual transition to plant ash in glass vessels in much the same period.
37. By N. Schibille, 'Late Byzantine mineral soda high alumina glasses from Asia Minor: a new primary glass production group', *PLoS ONE* 6.4 (2011) http://dx.doi.org/10.1371/journal.pone.0018970. This glass is typified by high alumina levels and produced not with plant ash but with a mineral soda different from that from Wadi Natrun. It dates to at least the eighth century and appears to have been made into the Ottoman period. Also see M. S. Tite, A. J. Shortland, N. Schibille and P. Degryse, 'New data on the soda flux used in the production of Iznik glazes and Byzantine glasses', *Archaeometry* 58.1 (2016), 57–67. R. H. Brill, 'Chemical analyses of the Zeyrek Camii and the Kariye Camii glasses', *DOP* 59 (2005), 213–30, describes the Zeyrek and Kariye glasses as soda-lime not potash and therefore not Western but Byzantine. The Zeyrek glass samples contain elevated levels of boron, suggesting a specific site probably in Turkey, Cyprus or Greece.
38. D. Jacoby, 'Byzantine trade with Egypt from the mid-tenth century to the Fourth Crusade', *Thesaurismata* 30 (2000), 25–77, shows the importance of Byzantine trade with Egypt, with Alexandria as a hub. The Serçe Limani shipwreck with its mixed cargo is another indicator of improving Byzantine and Fatimid relations and of the Levantine coast as a key area for the manufacture and export of glass: G. F. Bass, B. Lledo, S. Matthews and R. H. Brill, *Serçe Limani,* vol. 2*: The Glass of an Eleventh-Century Shipwreck* (College Station, TX, 2009); F. van Doornick, 'The medieval shipwreck at Serçe Limani', *Graeco-Arabica* 4 (1991), 45–52. Another wreck was found 30 km east of Serçe Limani in 1990, again containing glass and cullet.
39. Pliny, *Natural History* 36, ch. 66, 194 (for text and tr. see D. E. Eicholz, *Pliny, Natural History* (Cambridge, Mass., 1962), vol. 10). M.-D. Nenna, 'La production et la circulation du verre au proche-orient: état de la question', *Topoi* 8 (2007), 123–50; A. Silvestri, G. Molin, G. Salviulo and R. Schievenin, 'Sand for Roman glass production: an experimental and philological study', *Archaeometry* 48 (2006), 415–32. Work on isotopic compositions suggests that several primary glass factories were located throughout the Roman Empire, including in the west Roman glass across the empire: P. Degryse and J. Schneider, 'Pliny the Elder and Sr-Nd isotopes:

tracing the provenance of raw materials for Roman glass production', *Journal of Archaeological Sciences* 35 (2008), 1993–2000; D. Brems and P. Degrys, 'Trace element analysis in provenancing Roman glass-making', *Archaeometry* 56 (2014), 116–36; D. Brems et al., 'Isotopes on the beach part 1: strontium isotope ratios as a provenance indicator for lime raw materials used in Roman glass-making', *Archaeometry* 55 (2013), 214–34; Brems et al., 'Isotopes on the beach part 2: neodymium isotopic analysis for the provenancing of Roman glass', *Archaeometry* 55 (2013), 449–64; M. Ganio, S. Boyen, T. Fenn, R. Scott, S. Vanhoutte, D. Gimeno and P. Degryse, 'Roman glass across the empire: an elemental and isotopic characterization', *Journal of Analytical Atomic Spectrometry* 27 (2012), 743–53.

40. K. M. Wedepohl, 'The composition of Carolingian glass in Europe', in ed. H. E. M. Cool, *Annales du 16e Congrès de l'Association internationale pour l'histoire du verre, London 2003* (Nottingham, 2005), 203–6. Presumably quartz rather than sand formed the silica source.

41. Theophilus, *De diversis artibus, The Various Arts*, ed. and tr. C. R. Dodwell (Oxford, 1961 and reprinted 1986). Book 2 deals with glass.

42. I. Krueger and K. H. Wedepohl, 'Composition and shapes of glass of the early medieval period (8th to 10th century AD) in Central Europe', in eds. Foy and Nenna, *Échanges et commerce*, 93–100; K. H. Wedepohl, 'The composition of glass from the Carolingian and post-Carolingian period in Central Europe', in eds. F. Dell'Acqua and R. Silva, *Il colore nel medioevo: arte, simbolo, tecnica: la vetrata in occidente dal IV all'XI secolo* (Lucca, 2001), 257–70.

43. K. H. Wedepohl, 'The manufacture of medieval glass. Glassmaking in Europe between AD 500 and 1500', in ed. D. Whitehouse, *Medieval Glass for Popes, Princes and Peasants* (New York, 2010), 63–9.

44. See the collection of articles in ed. M. Mendera, *Archeologia e storia della produzione del vetro preindustriale* (Florence, 1991), looking at glass-making across Italy, including Gambassi, Florence, Pisa, Mantua and Palermo.

45. Jacoby, 'Raw materials'; M. Verità, A. Ranier and S. Zecchin, 'Chemical analyses of ancient glass findings excavated in the Venetian lagoon', *Journal of Cultural Heritage* 3 (2002), 261–713; W. P. McCray, *Glassmaking in Renaissance Venice* (Aldershot, 1999). On the Venetian import of ash: L. Zecchin, 'Materie prime e mezzi dei vetrai nei documenti veneziani dal 1233 al 1347', *Rivista della Stazione sperimentale del vetro* 4 (1980), 171–5; E. Ashtor and G. Cevidalli, 'Levantine alkali ashes and European industries', *Journal of European Economic History* 12 (1983), 475–522; M. Verità, 'L'influence de la tradition islamique sur la chimie et la technologie du verre vénitien', in ed. S. Carboni, *Venise et l'Orient 828–1797* (Paris, 2006), 276–9.

46. V. Han, 'The origin and style of medieval glass found in the central Balkans', *Journal of Glass Studies* 27 (1975), 114–26; P. Spufford, *Power and Profit: The Merchant in Medieval Europe* (London, 2002); M. Rogers, 'Glass in Ottoman Turkey', *Istanbuler Mitteilungen* 33 (1983), 239–67.

47. See ed. Mendera, *Archeologia e storia della produzione del vetro*; M. Verità, 'Technology of Italian glass mosaics', in eds. F. Piqué and D. C. Stulik, *Conservation of the Last Judgement Mosaic, St Vitus Cathedral, Prague* (Los Angeles, 2004), 123–34. For Rome in the early medieval period, see L. Saguì, 'Produzioni vetrariae a Roma tra tardo-antico e alto medioevo', in eds. L. Paroli and P. Delogu, *La storia economica di Roma nell'alto medioevo alta luce dei recenti scavi archeologici* (Florence, 1993), 113–36.

48. D. Whitehouse, '"Things that travelled": the surprising case of raw glass', *Early Medieval Europe* 12 (2003), 301–5; C. M. Jackson and S. Paynter, 'A great big melting pot: exploring patterns of glass supply, consumption and recycling in Roman Coppergate, York', *Archaeometry* 58.1 (2016), 68–95.

49. Stern, 'Roman glassblowing', esp. 442–4; Dell'Acqua Boyvadaoğlu, 'Between nature and artifice'; J. Price, 'Glass-working and glass workers in cities and towns', in eds. A. MacMahon and J. Price, *Roman Working Lives and Urban Living* (Oxford, 2005), 167–90.

50. Gorin-Rosen, 'The ancient glass industry in Israel'.

51. D. Jacoby, 'Benjamin of Tudela and his "Book of Travels"', Study II in his *Travellers, Merchants and Settlers in the Eastern Mediterranean, Eleventh to Fourteenth Centuries* (Aldershot, 2014), notes that Benjamin recorded Jewish glassmakers in Antioch and Tyre.

52. Stern, 'Roman glassblowing' and Lightfoot, 'Early Roman glass industry' are particularly keen on this west–east transmission. F. Dell'Acqua, 'Glassmakers in the west between Late Antiquity and the Middle Ages', in ed. M. Beretta, *When Glass Matters: Studies in the History of Science and Art from Graeco-Roman Antiquity to Early Modern Era* (Florence, 2004), 135–50; F. Dell'Acqua, 'La presenza/assenza dei vetrai nelle fonte scritti (secoli 4–11)', in eds. Dell'Acqua and Silva, *Il colore nel medioevo*, 195–212. For France: N. Brun, M. Pernot and B. Velde, 'Ateliers de verriers et tesselles de mosaïque', in eds. D. Foy and G. Sennequier, *Ateliers de verriers de l'antiquité à la période pré-industrielle* (Rouen, 1992), 47–52, and in the same volume, D. Foy, 'Ateliers de verriers de l'antiquité et du haut moyen âge en France', bring together evidence for forty-four glass workshops in France between the first and ninth centuries. For Spain see C. N. Duckworth et al., 'Electron microprobe analysis of 9th–12th century Islamic glass from Córdoba, Spain', *Archaeometry* 57 (2015), 27–50.

53. S. Nepoti, 'Dati sulla produzione medievale del vetro nell'area Padana centrale', in ed. Mendera, *Archeologia e storia*, 117–38A. A. Guidotti, 'Appunti per una storia della produzione vetraria di Firenze e del suo territorio pre-cinquecentesca', in ed. Mendera, *Archeologia e storia*, 161–76; M. Mendera, 'La production du verre mediéval en Toscane: les fouilles d'une verrerie a Germagnana (Gambassi-Florence)', in eds. Foy and Sennequier,

Ateliers de verrier, 89–102. For the Torcello furnaces, A. Gasparetto, 'Note sulla vetraria e sull'iconografia veraria Bizantine', *Journal of Glass Studies* 17 (1975), 101–13; A. Gasparetto, 'Matrici aspetti della vetraria Veneziana e Veneta medievale', *Journal of Glass Studies* 21 (1979), 76–97; M. Ferri, 'Reporti vitrii altomedievali dagli scavi di Torcello e S. Francesco del Deserto-Venezia', *Journal of Glass Studies* 48 (2006), 173–89; Andreescu-Treadgold and Henderson, 'Glass from Torcello'. More widely, D. Stiaffini, *Il vetro nel medioevo* (Rome, 1999); M. Mendera, 'Produzione vitrea medievale in Italia e fabbricazione di tesserae musive', in eds. Borsook et al., *Medieval Mosaics*, 97–138; A. Silvestri, G. Molin and G. Salviulo, 'Roman and medieval glass from the Italian area: bulk characterization and relationships with production technologies', *Archaeometry* 47 (2005), 797–816.

54. G. Lacerenza and D. Whitehouse, 'Glass and glass making in Byzantine Italy: the testimony of Šabbetay Donnoto', *Journal of Glass Studies* 46 (2004), 109–14; V. Han and L. Zecchin, 'Presenze balcaniche a Murano e presenze Muranesi nei Balcani', *Balcanica* 5 (1957), 77–87; C. Malthézou, 'Un artisan verrier crétois à Venise', in eds. D. Coulon et al., *Chemins d'outre-mer: études d'histoire sur la Méditerranée médiévale offertes à Michel Balard* (Paris, 2004), vol. 2, 537–42. For Venetian trade in glass with Crete see A. Laiou, 'Venice as a centre of trade and of artistic production in the thirteenth century', in ed. H. Belting, *Il medio oriente e l'occident nell'arte del XIII secolo* (Bologna, 1979), 11–26.

55. F. Gallo and A. Silvestri, 'Medieval glass from Rocca di Asolo (northern Italy): an archaeometric study', *Archaeometry* 54 (2012), 1023–39.

56. C. Harding, 'The production of medieval mosaics: the Orvieto evidence', *DOP* 43 (1989), 73–102.

57. P. Mirti, A. Lepora and L. Saguì, 'Scientific analysis of seventh-century glass fragments from the Crypta Balbi in Rome', *Archaeometry* 42 (2000), 359–74; P. Mirti, P. Davit, M. Gulmini and L. Saguì, 'Glass fragments from the Crypta Balbi in Rome: the composition of eighth-century fragments', *Archaeometry* 43 (2001), 491–502.

58. Jacoby, 'Raw materials', 71 and n.38, but no explanation is given for why production should have ceased for so far into the winter.

59. Jacoby, 'Raw materials'.

60. Ed. G. D. Weinberg, *Excavations at Jalame, Site of a Glass Factory in Late Roman Palestine* (Columbia, MO, 1988).

61. Han and Zecchin, 'Presenze balcaniche'; in 1280 the earliest reference to glassmakers comes with the presence of Gregory di Napoli (in the Morea in Greece); M. Constantoudaki-Kitromilides, 'A fifteenth-century Byzantine icon-painter working on mosaics in Venice. Unpublished documents', *Jahrbuch der Österreichischen Byzantinistik* 32 (1982), 265–72.

62. François and Spieser, 'Pottery and glass in Byzantium', 593–609. Two glassworkers from Athens are recorded in E. Sironen, *The Late Roman and Early Byzantine Inscriptions of Athens and Attica* (Helsinki, 1997), nos. 72 and 113.

63. The Cairo Geniza is a vast collection of Jewish religious and everyday documents (from shopping lists to accounts) stored in the Geniza (store room) of the Ben Ezra Synagogue in Fustat (Old Cairo) from the eleventh century onwards. See S. D. Goitein, *Studies in Islamic History and Institutions*, ch. 13: 'The working people of the Mediterranean area during the High Middle Ages' (Leiden, 1966), 25–78; and, more widely, S. D. Goitein, *A Mediterranean Society: The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza*, vol. 1: *Economic Foundations* (Berkeley, 1967).

64. With the notable exception of the work of A. C. Antonaras, including the major article 'Early Christian and Byzantine glass vessels: forms and uses', in eds. F. Daim and J. Drauschke, *Byzanz: das Romerreich im Mittelalter,* Monographien des römisches-germanischen Zentralmuseums 84, 2.1 (Mainz, 2011), 383–430; in the same volume, for an introduction to Byzantine glass in Asia Minor, see E. Lafli and B. Gurler, 'Frühbyzantinische Glaskunst in Kleinasien', 431–49. For glassworking in Athens, see E. M. Stern, 'Early Byzantine glass from Athens (5th–8th centuries)', in eds. B. Boehlendorf-Arslan and A. Ricci, *Byzantine Small Finds in Archaeological Contexts*, BYZAS 15 (2012), 49–60. M. Parani, 'Representations of glass objects as a source on Byzantine glass: how useful are they?', *DOP* 59 (2005), 147–71, collects a great deal of interesting material about images of glass objects.

65. Byzantine authors who make reference to glass workshops include Michael Glykas, John Moschos and the *Life* of Symeon the Fool: see Trowbridge, *Philological Studies in Ancient Glass*, 113. The fourteenth-century text of the *Life* of St Eugenios of Trebizond (the stories it contains are probably ninth to eleventh century) seems to imply that glass was not easily bought in Constantinople: J. O. Rosenqvist, 'Lamps for St Eugenios: a note on Byzantine glass', *Eranos* 92 (1994), 52–9.

66. A.-M. Talbot, 'The posthumous miracles of St Photeine', *Analecta Bollandiana* 112 (1994), 85–104, ch. 9.

67. Antonaras, 'Early Christian and Byzantine glass vessels'.

68. G. R. Davidson, 'A medieval glass factory at Corinth', *American Journal of Archaeology* 44 (1940), 297–324.

69. C. K. Williams II and O. H. Zervos, 'Frankish Corinth: 1992', *Hesperia* 62 (1993), 1–52, esp. 22–3; C. K. Williams II, 'Frankish Corinth: an overview', in eds. C. K. Williams and N. Bookidis, *Corinth: The Centenary 1896–1996* (Athens, 2003), 423–34, glass at 430; D. Whitehouse, 'Glassmaking at Corinth: a reassessment', in eds. Foy and Sennequier, *Ateliers de verriers*, 73–82, states that 'we should abandon the hypothesis widely accepted as fact that medieval glassmaking in Italy and central Europe was influenced by Byzantine glassmaking in Greece'.

70. C. Boschetti et al., 'Glass-working evidences at Durrës: an archaeological and archaeometric study', *Journal of Cultural Heritage* 9 (2008), www.sciencedirect.com/science/article/pii/S1296207408000897.

71. The evidence for glass-making in medieval Russia is confusing and unclear: see T. S. Noonan, 'Technology transfer between Byzantium and eastern Europe: a case study of the glass industry in early Russia', in eds. M. J. Chiat and K. L. Reyerson, *The Medieval Mediterranean: Cross-cultural Contacts* (St. Cloud, MN, 1988), 105–11.
72. Stern, 'Roman glassblowing'; D. Keller, 'Social and economic aspects of glass recycling', in eds. J. Bruhn, B. Croxford and D. Grigoropoulos, *TRAC 2004: Proceedings of the Fourteenth Annual Theoretical Roman Archaeology Conference* (Oxford, 2005), 6–78.
73. For Petra, see F. Marii and T. Rehren, 'Archaeological coloured glass cakes and tesserae from the Petra church', *Annales du 17e Congrès de l'Association internationale pour l'histoire du verre* (Antwerp, 2009), 295–300 and N. Schibille, F. Marii and T. Rehren, 'Characterisation and provenance of Late Antique window glass from the Petra church in Jordan', *Archaeometry* 49 (2007), 1–16.
74. A. Silvestri, G. Molin and G. Salviulo, 'The colourless glass of the *Iulia Felix*', *Journal of Archaeological Science* 35 (2008), 331–41; A. Silvestri, 'The coloured glass of the *Iulia Felix*', *Journal of Archaeological Science* 35 (2008), 1489–1501.
75. Bass, 'The nature of the Serçe Limani glass'; Bass et al., *Serçe Limani*, vol. 2.
76. Good introductions to colouring glass and tesserae in M. Verità, 'Technology and deterioration of vitreous mosaic tesserae', *Reviews in Conservation* 1 (2000), 65–76; J. Bayley, 'The analysis of glass beads', in eds. K. Blockley et al., *Excavations in the Marlowe Car Park and Surrounding Areas, The Archaeology of Canterbury*, vol. 5 (Canterbury, 1995), 1194–1205, but especially 1194–9; Henderson, *Science and Archaeology*, 65–82; Verità, 'Tecniche di fabbricazione dei materiali musiva vitrii'; C. Fiori and M. Vandini, 'Chemical composition of glass and its raw materials: chronological and geographical development in the first millennium AD', in ed. Beretta, *When Glass Matters*, 151–94.
77. None of the sites in Gorin-Rosen's summary of glass factories and workshops in Palestine, for example, offers any evidence for making tesserae: Gorin-Rosen, 'The ancient glass industry in Israel'. N. Brun, M. Pernot and B. Velde, 'Ateliers de verriers et tesselles de mosaïque', in eds. Foy and Sennequier, *Ateliers de verriers*, 47–54, bring together French material suggesting a possibility of workshops.
78. P. Mirti, P. Davit and M. Gulmini, 'Colourants and opacifiers in seventh and eighth century glass investigated by spectroscopic techniques', *Analytical and Bioanalytical Chemistry* 372 (2002), 221–9.
79. The Roman Glassmakers (Mark Taylor and David Hill) say that oxides like cobalt are amazingly powerful colourising agents: only 0.1 or 0.2% by weight is enough to colour a huge pot of glass.
80. See J. Henderson, 'Blue and other coloured translucent glass decoration with enamel: possible evidence for trade in cobalt-blue colourants', in ed. R. Ward, *Gilded and Enamelled Glass from the Middle East* (London, 1997), 116–21.
81. For discussion see D. J. Barber, I. C. Freestone and K. M. Moulding, 'Ancient copper red glasses: investigation and analysis by microbeam techniques', in eds. A. J. Shortland, I. C. Freestone and T. Rehren, *From Mine to Microscope: Advances in the Study of Ancient Technology* (Oxford, 2009), 115–28; R. H. Brill and N. D. Cahill, 'A red opaque glass from Sardis and some thoughts on red opaques in general', *Journal of Glass Studies* 30 (1988), 16–27; I. C. Freestone, C. P. Stapleton and V. Rigby, 'The production of red glass and enamel in the Late Iron Age, Roman and Byzantine periods', in ed. C. Entwistle, *Through a Glass Brightly: Studies in Byzantine and Medieval Art and Archaeology Presented to David Buckton* (London, 2003), 142–54; J. J. Kunicki-Goldfinger, I. C. Freestone, I. McDonald, J. A. Hobot, H. Gilderdale-Scott and T. Ayers, 'Technology, production and chronology of red window glass in the medieval period – rediscovery of a lost technology', *Journal of Archaeological Science* 41 (2014), 89–105, discussing the making of red stained glass in the medieval West. It should be noted that it is almost impossible to decolour coloured glass – if it is strongly coloured glass, e.g. copper red or green; the decolourisation is merely an oxidation of the iron discolouration.
82. Theophilus, *De diversis artibus* 2, 12; D. Buckton, 'Theophilus and enamel', in eds. D. Buckton and T. A. Heslop, *Studies in Medieval Art and Architecture Presented to Peter Lasko* (Stroud, 1994), 1–13. On recycling and the use of tesserae for colouring, I. C. Freestone, 'The recycling and reuse of Roman glass: analytical approaches', *Journal of Glass Studies* 57 (2015), 29–40.
83. Arletti et al., 'Glass tesserae from Daphni and Hosios Loukas (Greece)'.
84. S. Paynter and T. Kearns, *Analysis of Glass Tesserae: Technology Report. West Clacton Reservoir, Great Bentley Essex* (London, 2011); S. Paynter, T. Kearns, H. Cool and S. Chenery, 'Roman coloured glass in the Western provinces: the glass cakes and tesserae from West Clacton in England', *Journal of Archaeological Science* 62 (2015), 66–81.
85. Wedepohl, 'The composition of Carolingian glass', on Paderborn. N. Schibille and I. C. Freestone, 'Composition, production and procurement of glass at San Vincenzo al Volturno: an early monastic complex in southern Italy', *PLoS ONE* 8 (2013) http://dx.doi.org/10.137/journal.pone/0076479.
86. *The Patria*, 4, 32, tr. Albrecht Berger (Cambridge, Mass., 2013), 278–9: Basil took marbles and mosaics from the Church of the Holy Apostles to the Nea Ekklesia and the Church of the Mother of God of the Forum.
87. M. Greenhalgh, 'Islamic re-use of antique mosaic tesserae', *Journal of Mosaic Research* 1–2 (2008), 55–81.
88. M. Tite, T. Pradell and A. Shortland, 'Discovery, production and use of tin-based opacifiers in glasses, enamels and glazes from the Later Iron Age onwards: a reassessment', *Archaeometry* 50 (2008), 67–84.

89. For the mosaics of the Golden House, H. Lavagne, 'Le nymphée au Polyphème de la Domus Aurea', *Mélanges d'archéologie et d'histoire* 82 (1970), 721; E. Segala and I. Sciortino, *Domus Aurea* (Rome, 2005), 60. Gold tesserae are also known from the Stadium of Domitian: F. Sear, *Roman Wall and Vault Mosaics* (Heidelberg, 1977), cat. no. 77; Dunbabin, *Mosaics*, 245. For the Nymphaeum, M. Bartoli, V. Cousi and F. Felici, 'Il mosaico parietale del ninfeo di Lucullo sotto il palazzo nuovo della Bibliotheca Hertziana a Roma', in ed. C. Angelilli, *AISCOM* 14 (Rome, 2009), 509–20.
90. M. Verità and P. Santopadre, 'Analysis of gold-coloured ruby glass tesserae from Roman church mosaics of the 4th to 12th centuries', *Journal of Glass Studies* 52 (2010), 11–24; E. Neri and M. Verità, 'Glass and metal analyses of gold leaf tesserae from 1st to 9th century mosaics. A contribution to technological and chronological knowledge', *Journal of Archaeological Science* 40 (2013), 4596–606. Marco Verità informs me that the thickness of the silver leaf can be up to about 2 micrometres (gold leaf never exceeds 1 micrometre) and generally the average thickness is about 1 micrometre in contrast to gold leaf tesserae at 0.5 micrometres.
91. E. Neri, M. Verità, I. Biron and M. F. Guerra, 'Glass and gold: analyses of 4th–12th centuries Levantine mosaic tesserae. A contribution to technological and chronological knowledge', *Journal of Archaeological Science* 70 (2016), 158–71; E. Neri and M. Verità, 'Produrre tessere d'oro: bordi di piastra, ricettari, analisi archeometriche', in ed. C. Angelilli, *AISCOM* 18 (Rome, 2013), 351–65, plus two useful diagrams; Neri and Verità, 'Glass and metal analyses'; A. Conventi, E. Neri and M. Verità, 'SEM-EDS analysis of ancient gold leaf glass mosaic tesserae. A contribution to the dating of the materials', *IOP Conference Series, Materials Science and Engineering* 32 (2012), 1–8. For mining gold and silver in Byzantium, K.-P. Matschke, 'Mining', *EHB*, vol. 1, 115–20. The major sources of gold were Egypt, Armenia and the Balkans, so the shifting frontiers of empires could affect the supply of precious metal. Chapter 64 of the *Compositiones variae* describes making gold leaf. Y. Gorin-Rosen, 'Byzantine gold glass from excavations in the Holy Land', *Journal of Glass Studies* 57 (2015), 97–120, also discusses making gold glass.
92. The manuscript is Codex Marcianus gr. 299. It is discussed in M. K. Papathanassiou, 'Metallurgy and metalworking techniques', *EHB*, vol. 1, 121–7, esp. 125–6. Orvieto: Harding, 'Production of medieval mosaics', 79.
93. Conventi et al., 'SEM-EDS analysis'; Neri et al., 'Glass and gold', 166. At Ravenna, different types of base glass were used between 450 and 550, changing from greenish supports to redder versions, and indeed to mixtures of the two at S. Apollinare Nuovo and S. Vitale: E. Carbonaro, C. Muscolino and C. Tedeschi, 'La luce nel mosaic: le tessere d'oro di Ravenna. Tecniche di fabbricazione e utilizzo', in eds. F. Guidobaldi and A. Paribeni, *AISCOM* 6 (Ravenna, 2000), 709–18.
94. Pliny, *Natural History* 36, 193, suggests that glassmakers did it. The Roman Glassmakers propose that people who wanted to work with colours may simply have bought it in, which is exactly what most (other) glassmakers do today in fact. Most have a colourless glass in their furnaces, and use colours in powder or bars to temper their colourless in one way or another. D. Foy, 'Produits semi-finis colorés pour mosaïstes, orfèvres et verriers. Antiquité tardive et moyen âge. Premiers résultats d'une enquête en cours', *Bulletin de l'Association française pour l'archéologie du verre* (2007), 43–52, brings together French material. Also see D. Foy, 'Les revêtements muraux en verre à la fin de l'Antiquité: quelques témoignages en Gaule méridionale', *Journal of Glass Studies* 50 (2008), 51–65, and Gorin-Rosen, 'Byzantine gold glass', 100 and n.13 about making glass on site for use in buildings.
95. Paynter and Kearns, *West Clacton Reservoir*; V. van der Linden et al., 'Deeply coloured and black glasses in the northern provinces of the Roman Empire: differences and similarities in chemical composition before and after AD 150', *Archaeometry* 51 (2009), 822–44.
96. Paynter and Kearns, *West Clacton Reservoir.*
97. M. T. Wypyski and L. Becker, 'Glassmaking technology at Antioch: evidence from the Atrium House Triclinium and later mosaics', in eds. L. Becker and C. Kondoleon, *The Arts of Antioch: Art Historical and Scientific Approaches to Roman Mosaics and a Catalogue of the Worcester Art Museum Antioch Collection* (Worcester, Mass., 2005), 115–76, identify the base glasses as HIMT, Egypt II and Levantine I, and that antimony was used as the opacifier; also L. Becker, C. Kondoleon, R. Newman and M. T. Wypyski, 'The Atrium House Triclinium', in eds. Becker and Kondoleon, *The Arts of Antioch*, 17–80, notably the subsection on the glass at 49–61.
98. A. N. Shugar, 'Byzantine opaque red glass tesserae from Beit Shean, Israel', *Archaeometry* 42 (2000), 375–84.
99. L. Zecchin, *Vetro e vetrai di Murano*, 3 vols. (Venice, 1987, 1989, 1990), provides a mine of information: see vol. 1, 12 on *lingue*. Also Verità, 'Technology of Italian glass mosaics', 125.
100. Harding, 'Production of medieval mosaics', 76; Zecchin, *Vetro e vetrai*, vol. 3, 351–5.
101. By this time there were Tuscan glass factories but it is unclear if they produced glass for mosaics: M. Mendera, 'La production du verre médiéval en Toscane: les fouilles d'une verrerie à Germagnana (Gambassi-Florence)', in eds. Foy and Sennequier, *Ateliers de verriers de l'antiquité à la période pré-industrielle*, 89–102; Verità, 'Technology of Italian glass mosaics', 126, 133.
102. Freestone et al., 'Technology, chronology and production'.
103. So, for example, R. G. Newton, 'Colouring agents used by medieval glassmakers', *Glass Technology* 19 (1978), 56–60.
104. *Compositiones variae*: R. Parker Johnson, Compositiones variae *from Codex 490, Biblioteca Capitolare, Lucca, Italy:*

An Introductory Study (Urbana, 1939); ed. and tr. H. Hedfors, *Compositiones ad tingenda musiva* (Uppsala, 1932), recipes 1, 2 and 3 (repeated in the *Mappae clavicula* as recipes 224 and 144). More recently, A. Caffaro, *Scrivere in oro: ricettari medievali d'arte a d'artigianato (secolo IX–XI): Codici di Lucca e Ivrea* (Naples, 2003). For the *Mappae clavicula*, see ed. and tr. C. S. Smith and J. G. Hawthorne, 'Mappae clavicula = A little key to the world of medieval techniques', *Transactions of the American Philosophical Society* NS 64 (1974), part 4. D. Stiaffini, 'Ricette e ricettari medieval. Fonti per una storia delle tecniche di produzione delle tessere musive vitree', in eds. E. Borsook, F. Gioffredi Superbi and G. Pagliarulo, *Medieval Mosaics: Light, Color, Materials* (Milan, 2000), 65–95.

105. F. Tolaini, '*De tincto omnium musivorum*. Technical recipes for glass in the so-called *Mappae clavicula*', in ed. Beretta, *When Glass Matters*, 195–220.
106. Theophilus, *De diversis artibus* 2, 7; 8, 12.
107. For these glass recipes see G. Milanesi, *Dell'arte del vetro pro musaico: tre trattarelli dei secoli XIV e XV ora per la prima volta pubblicati* (Bologna, 1864); L. Zecchin, *Vetro e vetrai di Murano*, 3 vols. (Venice, 1987–90); D. C. Watts and C. Moretti, *Glass Recipes of the Renaissance* (privately published, 2011). Also see the useful discussion of Verità, 'Technology of Italian glass mosaics', 123–34. Cennini is Cennino D'Andrea, *The Craftsman's Handbook: The Italian 'Il libro dell' arte'*, tr. D. V. Thompson, Jr. (New Haven, 1933).
108. Stern, 'Roman glassblowing', 475.
109. A suggestion from Mark Taylor and David Hill, the Roman Glassmakers.
110. Marii and Rehren, 'Archaeological coloured glass cakes and tesserae'.
111. D. Foy, 'Produits semi-fins colorés pour mosaïstes, orfèvres et verriers. Antiquité tardive et moyen âge. Premier résultats d'une enquête en cours', *Bulletin de l'Association française pour l'archéologie du verre* (2007), 43–52; D. Foy, 'Les apports de verres de Méditerranée orientale en Gaule méridionale aux IV et V siècles avant J-C', in eds. Janssen et al., *Annales de la 17e International Congrès de l'Association internationale pour l'histoire du verre*, 121–9; D. Foy, 'Les revêtements muraux en verre à la fin de l'antiquité: quelques témoignages en Gaule méridionale', *Journal of Glass Studies* 50 (2008), 51–65 – sites such as Seviac, the villa of Montmaurin, Rodez, provide collections of tesserae for recycling; gold leaf plaques (for gold tesserae?) are known from Marseilles and Rodez. Foy also makes a case for itinerant mosaicists from Italy in Gaul.
112. Marii and Rehren, 'Archaeological coloured glass cakes', suggest this for Petra; also Schibille, Marii and Rehren, 'Characterisation and provenance'.
113. C. Tedeschi, 'Mosaics and materials. Mosaics from the fifth and sixth centuries in Ravenna and Poreč', in eds. C. Entwistle and L. James, *New Light on Old Glass: Recent Research on Byzantine Mosaics and Glass* (London, 2013), 112–20, 60–9; M. Verità, 'Glass mosaic tesserae of the Neonian Baptistery in Ravenna: nature, origin, weathering causes and processes', *Proceedings of the Conference: Ravenna Musiva, 22–24 October 2009* (Ravenna, 2010), 89–103; E. Gliozzo, A. Santagostino Barbone, M. Turchiano, I. Memmi and G. Volpe, 'The coloured *tesserae* decorating the vaults of the Faragola *balneum* (Ascoli Satriano), Foggia, southern Italy', *Archaeometry* 54 (2012), 311–31, suggest that the tesserae were probably coloured in secondary workshops.
114. *Patria*, 3.43, tr. Berger, 164–5 (my italics). For the church see R. Snee, 'Gregory Nazianzen's Anastasia Church: Arianism, the Goths, and hagiography', *DOP* 52 (1998), 157–86; R. Janin, *La géographie ecclésiastique de l'empire byzantin: le siège de Constantinople et le patriarcat œcuménique: les églises et les monastères* (Paris, 1953), Anastasia 2, 22–5.
115. The discussions in the next few paragraphs are points made by Mark Taylor and David Hill, the Roman Glassmakers, when I asked their advice. I am most grateful to them for their practical advice on these issues, which makes more sense than anything else anyone has suggested.
116. After experiments, the Roman Glassmakers suggest that Roman window panes were made this way.
117. Verità, 'Mosaico vitreo e smalti', 3.
118. This was the standard way of making windows into the twentieth century – all the glass for the Crystal Palace was made this way.
119. Vasari, *Le vite*, ch. 15; Milanesi, *Le opere*, vol. 1, 197–8; Zecchin, *Vetro e vetrai*, vol. 1, 16, 18–20; Verità, 'Technology of Italian glass mosaics', 125.
120. The Roman Glassmakers had a look at some coloured and gold tesserae in my possession and gave me their insights. If bars were used, then this might well show up in the tesserae. The upper and lower edges of glass, where they were cracked off the bar, would show a split, very smooth glossy surface, and the sides of a tessera, if it had come from a bar, should be by contrast slightly smoother and 'satiny'. Often 'grain' is noticeable in glass bars, like on a wooden log, so that strongly suggests a pulled glass bar if there are longitudinal striations in the fabric of the glass. If the tesserae were made from cast glass then that might be detectable. The early first- to third-century AD 'cast' glass is often called 'matt/glossy', because the side that met the powdered clay picks up some of it, as a separator, and it imparts a dull, matt surface appearance. The upper surface is fire-polished, of course, so glossy. The later 'cylinder' is known as 'double glossy' glass because it is fire polished on both sides. If any of the glass mosaic tesserae show clear evidence of this 'matt' side on one of their facets, that could possibly imply that they had been made by this method.
121. Verità, 'Mosaico vitreo e smalti', 80–2 and the Roman Glassmakers, from whom the technical details. Also see P. Loukopoulou and A. Moropoulou, 'Byzantine gold-leaf tesserae: a closer look at manufacturing technique and decay', in eds. A. Antonaras and D. Ignatiou, *Annales*

du 18e Congrès de l'Association internationale pour l'histoire du verre (Thessaloniki, 2012), 307–8.

122. Verità, 'Mosaico vitreo e smalti', 80–2.

123. *Ibid.* 83. Ş. Atik, 'Three Byzantine gold-glass pieces', in eds. Antonaras and Ignatiou, *Annales du 18e Congrès de l'Association internationale pour l'histoire du verre*, 309–14, suggests that some fifth- or sixth-century gold glass pieces found at Topkapı in Istanbul may have been similar 'lingue' for cutting into gold tesserae.

124. Ed. Hedfors, *Compositiones ad tigenda*, A30–B6; see also the discussion in Verità, 'Mosaico vitreo'.

125. Theophilus, *De diversis artibus*, 2, 15. See the experimental work of Daniel Howells in his 'Making Late Antique gold glass', in eds. Entwistle and James, *New Light on Old Glass*; also Verità, 'Mosaico vitreo e smalti', 56–8.

126. Harding, 'Production of medieval mosaics', 88.

127. Verità, 'Technology and deterioration of vitreous mosaic tesserae'; T. Rehren and I. C. Freestone, 'Ancient glass: from kaleidoscope to crystal ball', *Journal of Archaeological Science* 56 (2015), 233–41, for a sort of where we are now and where we might go in glass analysis generally. I. C. Freestone, M. Bimson and D. Buckton, 'Compositional categories of Byzantine glass tesserae', *Annales du 11e Congrès de l'Association internationale pour l'histoire du verre 1988* (Amsterdam, 1990), 271–80, is one of the earliest examples of the testing of mosaic tesserae. Also I. Roncuzzi Fiorentini and C. Fiori, 'Applicazione dell'analisi chimica allo studio del vetro musivo bizantino del V–VI secolo', in ed. C. Fiori, *Mosaico: analisi dei materiali e problematiche di restauro* (Ravenna, 1996). Robert H. Brill of the Corning Museum of Glass has been analysing glass since the 1960s and his three volumes *Chemical Analyses of Early Glasses* (New York, 1999 and 2012) are an invaluable tool.

128. Grieff and Hartmann, '"Wer Kriegt was?"' has several useful maps showing the distribution of these groups. On homogeneity, C. M. Jackson, M. J. Baxter and H. E. M. Cool, 'Identifying group and meaning: an investigation of Roman colourless glass', in eds. Foy and Nenna, *Échanges et commerce*, 33–9; I. C. Freestone, K. A. Leslie, M. Thirlwall and Y. Gorin-Rosen, 'Strontium isotopes in the investigation of early glass production: Byzantine and Early Islamic glass from the Near East', *Archaeometry* 45 (2001), 19–32. A. Silvestri, G. Molin and G. Salviulo, 'Roman and medieval glass from the Italian area: bulk characterization and relationships with production techniques', *Archaeometry* 47 (2005), 797–816; N. Schibille, P. Degryse, M. Corremans and C. G. Specht, 'Chemical characterisation of glass mosaic tesserae from sixth-century Sagalassos (south-west Turkey): chronology and production techniques', *Journal of Archaeological Science* 39 (2012), 1480–92.

129. Freestone, 'Glass production in Late Antiquity', 210, on why recycling may not have had as big an effect as we might think. Henderson, 'Glass trade and chemical analysis', 119–20, suggests that recycling need not necessarily cause problems in identifying separable subspecies of plant ash glass.

130. As Becker et al., 'The Atrium House Triclinium', 49–61, wonder may have been the case at Antioch, noting that a workshop might change its practices – prices, availability, travel, death of a particular key player.

131. Issues over the ways in which glass is tested and analysed can also make it impossible to compare data.

132. Verità and Santopadre, 'Analysis of gold-coloured ruby glass tesserae'.

133. See M. Verità, B. Profilo, M. Vallotto and A. Rava, 'I mosaici della basilica dei Santi Cosma e Damiano a Roma: studio analitico delle tessere vitree', *Scienza e beni cultura* 18 (2002), 801–12; M. Verità and M. Vallotto, 'Analisi delle tessere musive', in V. Tiberià, *Il mosaico di Sta Pudenziana a Roma: il restauro* (Rome, 2003), 178–99; C. Fiori, M. Vandini, G. Ercolani and C. Mingazzini, 'I vetri del mosaico absidale di S. Ambrogio a Milano/Glass of the apse mosaic of S. Ambrogio in Milan', *Rivista della stazione sperimentale del vetro, Murano* 29 (1999), 21–9; C. Bertelli, 'Frammenti del mosaico di Sant'Ambrogio a Milano', in ed. C. Bertelli, *Il futuro dei longobardi: l'Italia e la costruzione dell'Europa di Carlo Magno* (Milan, 2000), 388.

134. Verità and Santopadre, 'Analysis of gold-coloured ruby glass'.

135. M. Verità, M. S. Arena, A. M. Carruba and P. Santopadre, 'Roman glass: art and technology in a 4th century A.D. *opus sectile* in Ostia (Rome)', *Journal of Cultural History* 9 (2008), 16–20.

136. Tin was used at S. Maria in Trastevere, for example: see V. Tiberià, *I mosaici del XII secolo e di Pietro Cavallini in Santa Maria in Trastevere* (Rome, 1996), 179–86 and appendices 1 and 2; quartz is used in some tesserae from the eleventh-century churches of Hosios Loukas and Daphni: Arletti et al., 'Glass tesserae from Daphni and Hosios Loukas'.

137. M. Uboldi and M. Verità, 'Scientific analyses of glasses from late antique to early medieval archaeological sites in northern Italy', *Journal of Glass Studies* 45 (2003), 115–37; Verità and Santopadre, 'Analysis of gold-coloured ruby glass'.

138. For Petra, see Marii and Rehren, 'Archaeological coloured glass cakes and tesserae' and Marii, 'Glass tesserae'; for the Neonian Baptistery, Verità, 'Glass mosaic tesserae of the Neonian Baptistery'.

139. See A. Terry and H. Maguire, *Dynamic Splendor: The Wall Mosaics in the Cathedral of Eufrasius at Poreč* (Philadelphia, 2007), on this; also Tedeschi, 'Mosaics and materials'.

140. I am very grateful to Ann Terry who shared this information with me, which she had received in an email from Robert Brill. However, it needs to be noted that the samples were very small and that antimony opacified tesserae may simply not have formed a part of them.

141. Verità, 'Glass mosaic tesserae of the Neonian Baptistery'. Butrint: S. Conte, T. Chjinni, R. Arletti and M. Vandini, 'Butrint (Albania) between eastern and western

Mediterranean glass production: EMPA and LA-ICP-MS of late antique and early medieval finds', *Journal of Archaeological Science* 49 (2014), 6–20, suggest that, between the fourth and sixth centuries, glass materials were probably imported from different suppliers.

142. A. Silvestri, S. Tonietto and G. Molin, 'The palaeo-Christian glass mosaic of St. Prosdocimus (Padova, Italy): archaeometric characterisation of "gold" tesserae', *Journal of Archaeological Science* 38 (2011), 3402–14 – HIMT in fact; A. Silvestri, S. Tonietto, G. Molin and P. Guerriero, 'The palaeo-Christian glass mosaic of St. Prosdocimus (Padova, Italy): archaeometric characterisation of tesserae with antimony- or phosphoros-based opacifiers', *Journal of Archaeological Science* 39 (2012), 2177–90.

143. N. Schibille and J. McKenzie, 'Glass tesserae from Hagios Polyeuktos, Constantinople: their early Byzantine affiliations', in eds. D. Keller, J. Price and C. Jackson, *Neighbours and Successors of Rome: Traditions of Glass Production and Use in Europe and the Middle East in the Later First Millennium AD* (Oxford, 2014), 114–27.

144. S. Hreglich and M. Verità, 'Determinazione alla microsonda elettronica della composizione chimica di alcune tessere di alcune tessere di mosaico vetroso, campionate nella cappella sud della Basilica di S. Maria Assunta a Torcello', in ed. R. F. Campanati, *Il mosaico antico. III Colloquio internazionale sul mosaico antico, Ravenna* (Ravenna, 1983), vol. 1, 553–4; Verità, 'Technology of Italian glass mosaics'; M. Verità and S. Zecchin, 'Scientific investigation of Byzantine glass tesserae from the mosaics of the south chapel of Torcello's basilica, Venice', in eds. Antonaras and Ignatiou, *Annales du 18e Congrès de l'Association internationale pour l'histoire du verre*, 315–20.

145. Andreescu-Treadgold and Henderson, 'Glass from the mosaics'.

146. There is a question about how quickly plant ash technology spread and how much recycling of natron glass there was. The material from Nogara (Silvestri and Marcante, 'The glass of Nogara') suggests there was a lot of recycling of natron glass and that it was more readily accessible than anything else – so what does that say about trade?

147. C. Fiori, D. Chrysopoulis, I. Karatasos and V. Lampropoulos, 'Compositional and technical characteristics of glass tesserae from the vault mosaic of Daphni Monastery, Greece', in ed. Kordas, *Hyalos, Vitrum, Glass*, 193–7; Arletti et al., 'A study of glass tesserae'; R. Arletti, 'A study of glass tesserae from mosaics in the monasteries of Daphni and Hosios Loukas', in eds. Entwistle and James, *New Light on Old Glass*, 70–5.

148. M. Verità and S. Rapisarda, 'Studio analitico di materiali vitrei del XII–XIII secolo dalla Basilica di Monreale a Palermo', *Rivista della Stazione sperimentale del vetro* 2 (2008), 15–29. Tesserae from a thirteenth- or fourteenth-century mosaic from Messina were opacified with either quartz or tin: R. Arletti et al., 'Archaeometrical analyses of glass cakes and vitreous mosaic tesserae from Messina (Sicily, Italy)', *Journal of Non-Crystalline Solids* 354 (2008), 4962–9.

149. M. Verità, 'Riscontri analitici sulle origini della vetraria veneziana', in ed. Mendera, *Archeologia e storia*, 481–92; M. Verità, 'Analisi di tessere musive vitree del Battistero della basilica di San Marco in Venezia', in *Scienza e technica del restauro della basilica di San Marco* (Venice, 1999), 567–85. However, Verità also notes that this cannot exclude the possibility of the fourteenth-century glass coming from the East.

150. R. Arletti, S. Conte, M. Vandini, C. Fiori, S. Bracci, M. Bacci and S. Porcinai, 'Florence Baptistery: chemical and mineralogical investigation of glass mosaic', *Journal of Archaeological Science* 38 (2011), 79–88, but also see Verità, 'Technology of Italian glass mosaics'.

151. Though the white glass appears to be coloured by a 'lead tin calx', a typically Venetian technique.

152. Verità, 'Technology of Italian glass mosaics', 126.

153. Tedeschi, 'Mosaics and materials'.

154. Whitehouse, '"Things that travelled"', 301–5. I. C. Freestone, J. Price and C. R Cartwright, 'The batch: its recognition and significance', in eds. Janssens et al., *Annales de la 17e International Congrès de l'association international pour l'histoire du verre*, 130–5.

2 MAKING MOSAICS

1. Kiti has never been fully published, or recorded, which is why I am unable to give the dimensions of the apse. The best account of it that I know is that of David Winfield in his *Byzantine Mosaic Work: Notes on History, Technique and Colour* (Lefkosia, 2005), who dates it to the fifth century. Also see A. M. Foulias, *The Church of the Panagia Angeloktistos at Kiti near Larnaka* (Nikosia, 2004), who sees it as sixth century, as does R. S. Cormack, *Byzantine Art* (Oxford, 2000), 53.

2. On this, see the comments of I. Andreescu-Treadgold, 'The mosaic workshop at San Vitale', in eds. A. M. Iannucci, C. Fiori and C. Muscolino, *Mosaici a S. Vitale e altri restauri* (Ravenna, 1992), 31–41, who highlights in the long note 3 problems where such observations have not been made. See also E. Borsook, 'Tecnica musiva: domande in cerce di riposte', in eds. F. Giodobaldi and A. Paribena, *AISCOM* 6 (Ravenna, 2000), 601–8.

3. R. S. Cormack, 'The apse mosaics of S. Sophia at Thessaloniki', *Deltion tes Christianikes Archaiologikes Etaireias* 10 (1980–81), 131.

4. O. Demus, *The Mosaics of San Marco in Venice*, 2 vols. in 4 (Chicago, 1984), vol. 1, 27.

5. J. Happa, A. Artusi, K. Debattista, T. Bashford-Rogers, V. Hulusić and A Chalmers, 'The virtual reconstruction and daylight illumination of the Panagia Angeloktisti', in eds. K. Debattista, C. Perlingieri, D. Pitzalis and S. Spina, *VAST 2009: The 10th International Symposium on Virtual Reality, Archaeology, and Cultural Heritage: The 7th EUROGRAPHICS Workshop on Graphics and Cultural Heritage: St. Julians, Malta, September 22–25, 2009* (Aire-la-Ville, Switzerland, 2009).
6. O. Demus, *Byzantine Mosaic Decoration* (London, 1948), 36 and plate 26.
7. Retold by R. Cormack in 'The talented Mr Hawkins', in eds. H. A. Klein, R. G. Ousterhout and B. Pitarakis, *Kariye Camii yeniden/The Kariye Camii Reconsidered* (Istanbul, 2011), 507. Doula Mouriki, *The Mosaics of Nea Moni on Chios* (Athens, 1985), 97, also said that there was no point talking about the original setting and depth of the mosaics because of their resetting in course of restorations. Ernest Hawkins, like David Winfield, was a central figure in the restoration and understanding of Byzantine mosaics.
8. J. Winfield and D. Winfield, *Proportion and Structure of the Human Figure in Byzantine Wall-painting and Mosaic* (Oxford, 1982), 128.
9. R. Ousterhout, *Master Builders of Byzantium* (Princeton, 1999), 250.
10. Cormack, 'The talented Mr Hawkins', shows Hawkins demonstrating how the architecture came first.
11. A. Papaconstantiou, 'Divine or human? Some remarks on the design and layout of Late Antique basilicas', in eds. A. Cutler and A. Papaconstantinou, *The Material and the Ideal* (Leiden, 2007), 31–46. Ousterhout, *Master Builders* and N. Schibille, 'The profession of the architect in Late Antique Byzantium', *Byzantion* 79 (2009), 360–79.
12. Winfield and Winfield, *Proportion and Structure*, 133 on the use of a compass for laying out haloes; 163–5 for guidelines in paint.
13. J. Shearman, *Only Connect ... : Art and the Spectator in the Italian Renaissance* (Princeton, 1992), 161–5.
14. D. Kinney, 'The apse mosaic of Sta Maria in Trastevere', in eds. E. Sears and T. K. Thomas, *Reading Medieval Images: The Art Historian and the Object* (Ann Arbor, MI, 2002), 19–26.
15. Three seems most common. See Winfield, *Byzantine Mosaic Work*; D. Winfield, 'Middle and later Byzantine wall-painting methods. A comparative study', *DOP* 22 (1968), 64–5, on the apparently very similar use in wall painting; P. Niewöhner and N. Teteriatnikov, 'The south vestibule of Hagia Sophia at Istanbul. The ornamental mosaics and the private door of the patriarchate', *DOP* 68 (2015), 117–55, esp. 144–7 on the plaster in Hagia Sophia.
16. P. A. Underwood, *The Kariye Djami* (New York, 1966), vol. 1, 173. The Chora has three layers of plaster, some 5–6 cm deep in total. At St Catherine's, Mount Sinai, the plaster is about 2–3 cm thick, but laid on dressed granite not rough brick.
17. Winfield, 'Middle and later Byzantine wall-painting methods', emphasizes that the composition of the plaster used for wall painting changed little over the centuries. He believes that the plaster for wall painting and wall mosaics was very similar. Sedge was used to absorb moisture in Hagia Sophia: R. Özil, 'The conservation of the dome mosaics of Hagia Sophia', in eds. G. Arsebük, M. J. Mellink and W. Schirmer, *Light on Top of the Black Hill: Studies Presented to Halet Çambel* (Istanbul, 1998), 543–9; Niewöhner and Teteriatnikov, 'The south vestibule'. In the room over the vestibule, 'straw' was used in the setting bed: R. Cormack and E. J. W. Hawkins, 'The mosaics of St. Sophia at Istanbul: the rooms above the southwest vestibule and ramp', *DOP* 31 (1977), 213.
18. Ozil, 'Conservation'; C. Harding, 'The production of medieval mosaics: the Orvieto evidence', *DOP* 43 (1989), 73–102.
19. Whether we believe its numbers or not, the *Narratio* of Hagia Sophia, 7, implies the existence of teams of workers when it declared that 100 master craftsmen each with 100 men worked on the church: Book 4 of the *Patria*, tr. Berger, 240–1.
20. Winfield, *Byzantine Mosaic Work*, 27.
21. Cormack and Hawkins, 'The rooms above the vestibule and ramp', 213.
22. Winfield, 'Middle and later Byzantine wall-painting methods', 69–71.
23. Cited in *ibid.* 78.
24. The manuscript is Leiden, Biblioteca Universitaria ms. Voss. Gr. q.7, c.39v. The translation is Michael McGann's, as are the notes and comments on the text below, nn.25–32. I am eternally grateful to Michael McGann and to Estelle Sheehan and Tony Sheehan for their help with this text. The text used is that given by Elisabetta Neri in her unpublished doctoral thesis, 'Tessellata vitrea in eta tardoantica e altomedievale: archeologia, tecnologia, archeometria. Il caso di Milano', Sacro Cuore University, Milan (2012), documento 1.14: 'Temperamentum de calce et sablone ad museum faciendum.Tolle mensuras de calce nova bene lavata et in sole siccata et adde eiusdem mensurae tertium sablonis et commisce cum oleo. Sin autem oleum non sit ius adhibe carnium et cum sit missum hoc temperamentum in parietem iuxta arbitrium pictoris premitur postea tabselli in illud temperamentum mediocriter mollem at tamen inprimitus in nuda pariete designent imagines seu aliae quaelibet formae. Postea secundum voluntatem artificis pars parva tonicetur sive etiam quantum in ipsa hora perficere voluerit.' It is not clear whether Neri's readings derive from conjecture or from her own inspection of the manuscript, but her text is slightly different from and better punctuated than that provided by J. Gage, 'Colour in history: relative and absolute', *Art History* 1 (1978), 128, n.76. A. Monciatti and N. Blamoutier, 'Le baptistère de Florence. "Ex musivo Figuravit". Dessin, texture, et interprétations de la mosaïque mediéval', *Revue de l'art* 120 (1998), 17, quote only part of the text, from *cum sit missum* to *quaelibet formae*. Apart from

the insignificant difference between his *imprimitus* and Gage's *inprimitus*, his text seems identical with Gage's.

25. *Carnium* as an alternative spelling of *carneum*.
26. Making the assumption that *tabselli* is nominative plural and means 'tesserae'.
27. In the absence of punctuation it is difficult to determine whether this phrase belongs to the *cum* clause or the main clause.
28. Reading subjunctive *premantur* for the impossible *premitur*; cf. *designent(ur)* and *tonicetur*. Neri: *prementur*. This would be an isolated future that does not seem very appropriate.
29. *Mollem* is puzzling: it is translated here as if it were *molle*.
30. Reading, with Neri, *designentur* for *designent*. At a pinch *designent* might be taken to have an unspecific subject – 'let them [the workers] draw' – but this seems unlikely in a text quite concerned with the functions of individuals.
31. Taking *at tamen . . . pariete* to be a sort of afterthought looking back to the very beginning of the process. Hence the brackets, which should probably be printed in the Latin text.
32. Taking *tonicetur* to be an alternative spelling of *tunicetur*.
33. See eds. C. Fiori and C. Muscolino, *Restauri ai mosaici nella basilica di s Vitale a Ravenna: l'arco presbiteriale* (Faenza, nd), 14–15, and illustrated in A. Terry and H. Maguire, *Dynamic Splendor: The Wall Mosaics in the Cathedral of Eufrasius at Poreč* (Philadelphia, 2007), figs. 264 and 265; Mouriki, *Nea Moni*, 77; D. M. Deliyannis, *Ravenna in Late Antiquity* (Cambridge, 2010), 265–6 and 268. For Monreale: S. Brodbeck, 'Le chantier du décor en mosaïque de la cathédrale de Monreale', *Arte medievale* 3 (2013), 271–86, at 274.
34. Underwood, *Kariye Djami*, vol. 1, 175, though see also the note on 177 on Whittemore's view of the SW vestibule. The same is said to be true of many of the mosaics of Constantinople. Monciatti and Blamoutier, 'Le baptistère de Florence', 11–22, discuss the possible use of drawings in the making of the mosaics of the fourteenth-century Florence Baptistery.
35. Underwood, *Kariye Djami*, vol. 1, 176, and F. Forlati, 'La tecnica die primi mosaicisti marciani', *Arte Veneta* 3 (1949), 8–87.
36. T. Whittemore, *The Mosaics of Haghia Sophia at Istanbul: Third Preliminary Report: Work Done in 1935–1938: The Imperial Portraits of the South Gallery* (Oxford, 1929), charts this.
37. Poreč: Terry and Maguire, *Dynamic Splendor*, vol. 1, 77–8; Lythrankomi: A. H. S. Megaw and E. J. W. Hawkins, *The Church of the Panagia Kanakariá at Lythrankomi in Cyprus: Its Mosaics and Frescoes* (Washington, DC, 1977), 132.
38. Mouriki, *Nea Moni*, 95.
39. Winfield, 'Middle and later Byzantine wall-painting methods'.
40. P. J. Nordhagen, 'The mosaics of John VII (705–707 AD). The mosaic fragments and their technique', *ActaNorv* 2 (1965), 121–66.
41. Whittemore, *Imperial Panels*, 35, n.25, notes indigo blue underpainting of the second layer of plaster; 58 describes the painted setting bed below the figure of Zoe. C. Mango and E. J. W. Hawkins, 'Additional notes', *DOP* 18 (1964), 302–3, on the underpainting at Constantine Lips. Underwood, *Kariye Djami*, noted that the paints used there were watercolours, not a lime-based fresco paint, judging by their appearance.
42. P. A. Underwood and E. J. W. Hawkins, 'The mosaics of Hagia Sophia at Istanbul: the portrait of the Emperor Alexander: a report on work done by the Byzantine Institute in 1959 and 1960', *DOP* 15 (1961), 187–217, describe this in some detail.
43. A. Moropoulou, A. Bakolas, M. Giannoulaki and M. Karoglou, 'Characterization of dome mosaics of Hagia Sophia in Constantinople', *Scienza e beni culturali* 18 (2002), 225–35 and 843–50 (= eds. G. Biscontin and G. Driussi, *Atti del Convegno di studi I mosaici – cultura, tecnologia, conservazione* (Venice, 2002)). However, W. S. George, *The Church of Saint Eirene at Constantinople* (London, 1913), 53, felt it made no difference, though he suggested at 47 that mixing silver in with the gold made the overall effect less brassy.
44. Winfield, 'Middle and later Byzantine wall-painting methods', 80, offers evidence for divisions in wall paintings as being incised or drawn in as a first stage. At S. Apollinare in Classe, evidence of underpainting in red has survived and a peg was used in the central medallion from which the circle was drawn: pictured in Deliyannis, *Ravenna*, fig. 94 on 265, and 266. Ed. C. Robotti, *Mosaico e architettura: disegni, sinopie, cartoni* (Naples, 1983), 18–32, has images of herringbone plasterwork and underdrawing at S. Marco. Such plasterwork and red sinopie is also apparent in an eighth-century Islamic mosaic from Beit Shean: E. Khamis, 'Two wall mosaic inscriptions from the Umayyad market place in Bet Shean/Baysan', *Bulletin of the School of Oriental and African Studies* 64 (2001), 159–76, at 165. Here it seems that the gold cubes of the inscription were set before the background.
45. Underwood, *Kariye Djami*, vol. 1, 132, suggested a sequence of painting: fresh final coat; composition lightly sketched in; contours of figures, drapery folds, key elements of the composition drawn in more firmly; backgrounds painted; ground colour for drapery of figures applied; lines incised for detailed overpainting; hands, feet, heads done in detail by master; and he suggested that mosaic may well have been done in a similar sequence. If so, painters and mosaicists would have had to work fast.
46. P. Bruneau, 'Les mosaïstes antiques avaient-ils des cahiers de modèles?', *Revue archéologique* NS 2 (1984), 241–72, although about floors, emphasises the lack of clearness in the terms used by scholars.
47. British Museum MS Cotton Otho B.VI. H. L. Kessler, 'The Cotton Genesis and Creation in the San Marco mosaics', *CahArch* 53 (2009–10), 17–32; K. Weitzmann, 'The Genesis mosaics of San Marco and the Cotton Genesis miniatures', in Demus, *Mosaics of*

San Marco, vol. 2, 105–42; M. Belozerskaya and K. Lapatin, 'Antiquity consumed. Transformations at San Marco, Venice', in eds. A. Payne, A. Kuttner and R. Smick, *Antiquity and its Interpreters* (Cambridge, 2000), 83–95; P. H. Jolly, *Made in God's Image? Adam and Eve in the Genesis Mosaics at San Marco, Venice* (Stanford, 1997).

48. Scholarly opinion is divided. B. Brenk, *Die frühchristlichen Mosaiken in S. Maria Maggiore zu Rom* (Wiesbaden, 1975), favoured the idea of model books, as did Paul Underwood for the Kariye Camii, and Kitzinger and Weitzmann. In contrast, Winfield, 'Middle and Later Byzantine wall painting', 81, was less enthusiastic. Also see M. Mason, 'Usuvano libri di modelli I mosaicisti bizantini? Un caso particolare di *revival* e trasmissione di un repertorio antiquario', in eds. F. Guidobaldi and G. Tozzi, *AISCOM* 17 (Rome, 2012), 601–10.

49. Making unlikely the suggestion of V. Tiberià, *Il restauro del mosaico della basilica dei Santi Cosma e Damiano a Roma* (Todi, 1991), that cartoons were used in the sixth- or seventh-century mosaics of the arch in this church. See C. Bambach, *Drawing and Painting in the Italian Renaissance Workshop: Theory and Practice, 1300–1600* (Cambridge, 1999), 21. Linen or cotton rag paper was only available from the thirteenth century: *ibid.* 34.

50. Harding, 'Production of medieval mosaics'.

51. Although Winfield, *Byzantine Mosaic Decoration*, 10, disagrees. Terry and Maguire, *Dynamic Splendor*, 77, think the complexity of the design of the mosaics of the Eufrasian basilica meant plans were needed. On the other hand, fourteenth-century Italian frescoes provide evidence of drawing straight onto the walls: see M. O'Malley, *The Business of Art: Contracts and the Commissioning Process in Renaissance Italy* (New Haven, 2005), 198.

52. As indeed has been argued convincingly for Renaissance religious art: C. Hope, 'Altarpieces and the requirements of patrons', in eds. T. Verdon and J. Henderson, *Christianity and the Renaissance: Image and Religious Imagination in the Quattrocento* (Syracuse, 1990), 535–71.

53. Winfield and Winfield, *Proportion and Structure*, 119–30, show how this would work at Kiti. Also see H. Torp, 'The integrating system of proportion in Byzantine art. An essay on the methods of the painters of holy images', *ActaNorv* 4 (1984), 1–189.

54. M. Carruthers, *The Craft of Thought: Meditation, Rhetoric, and the Making of Images, 400–1200* (Cambridge, 1998).

55. Cennino D'Andrea Cennini, *The Craftsman's Handbook: The Italian 'Il libro dell' arte'*, tr. D. V. Thompson, Jr. (New Haven, 1960), ch. 8, 5. A. Cutler, 'The right hand's cunning: craftsmanship and the demand for art in Late Antiquity and the early Middle Ages', *Speculum* 72 (1997), 971–94, makes the point that textual evidence suggests copying from nature and use of models, especially in portraiture where there is an insistence on detailed observation. Sculpture offered a middle way between lots of measuring points and doing by eye alone.

56. I. Andreescu-Treadgold, 'The mosaics of Venice and the Venetian lagoon: thirty-five years of research at Torcello (I)', *Arte medievale* 3 (2013), 193–206, at 201.

57. I. Andreescu-Treadgold, 'The mosaic workshop at San Vitale', in eds. A. M. Iannucci, C. Fiori and C. Muscolino, *Mosaici a S. Vitale e altri restauri* (Ravenna, 1992), 31–41, esp. 34–5; Andreescu-Treadgold, 'The mosaics of Venice and the Venetian lagoon', 201, for evidence of this and the adoption of different spatial solutions at Torcello; Poreč, see Terry and Maguire, *Dynamic Splendor*, 83–5.

58. Megaw and Hawkins, *Lythrankomi*, 37–8.

59. Terry and Maguire, *Dynamic Splendor*, 75–6.

60. C. Mango and E. J. W. Hawkins, 'The apse mosaics of St. Sophia at Istanbul. Report on work carried out in 1964', *DOP* 19 (1965), 116–19.

61. J. DeLaine, *The Baths of Caracalla: A Study in the Design, Construction, and Economics of Large-Scale Building Projects in Imperial Rome* (Portsmouth, RI, 1997), 181.

62. The table is a selection from the limited published data. See H. Torp, 'La technique des mosaïques de la Rotonde de Thessaloniki', *Arte medievale* 4 (2014), 267–80, at 270; normal ones 1.25 cm^2; Megaw and Hawkins, *Lythrankomi*; C. Mango and E. J. W. Hawkins, 'The mosaics of St. Sophia at Istanbul. The Church Fathers in the North Tympanum', *DOP* 26 (1972), 1 and 3–41; Mango and Hawkins, 'The apse mosaics of St. Sophia'; Underwood and Hawkins, 'The mosaics of Hagia Sophia at Istanbul'; Whittemore, *Imperial Panels* for Zoe and Eirene panels; Mouriki, *Nea Moni*; T. Whittemore, *The Mosaics of Haghia Sophia at Istanbul: Fourth Preliminary Report: Work Done in 1934–1938: The Deesis Panel of the South Gallery* (Oxford, 1952); Underwood, *Kariye Djami*, vol. 1; R. Ousterhout, Z. Ahunbay and M. Ahunbay, 'Study and restoration of the Zeyrek Camii in Istanbul, second report, 2001–2005', *DOP* 63 (2009), 235–56, where they add that tesserae were about 0.4 to 0.75 cm thick.

63. See A. Cutler, 'The industries of art', *EHB*, vol. 2, 557–61, at 559.

64. DeLaine, *The Baths of Caracalla*, 181; discussed in more detail in the next chapter. DeLaine, 182, also cited calculations from O. Demus, *Mosaics of Norman Sicily* (London, 1969), 145, which suggested the mosaics of Monreale would have taken 100 workmen 3 years or 50 men 6 years, Demus' preferred alternative. On this basis, DeLaine calculated 300 man-years for the Monreale mosaics or 10–14 man-days per square metre depending on length of year and the day, and so thinks her figures for the Baths of Caracalla may be too low. If we use her own estimate of 5.8 m^2 this becomes 156 weeks, 3 years for 1 man. However, I went and looked at Demus' sources for these figures, where they are given in the Sicilian unit of *palmi quadrati*, and no explanation of how they have been arrived at is offered. For all we can tell, they were plucked from the air, so I suggest that they be disregarded.

65. My thanks to Tessa Hunkin for discussing this aspect with me.

66. Figures from C. M. Richardson, 'Constructing space in Renaissance paintings', in ed. K. W. Woods, *Making Renaissance Art* (London, 2007), 68.
67. A. Conventi, E. Neri and M. Verità, 'SEM-EDS analysis of ancient gold leaf glass mosaic tesserae. A contribution to the dating of the material', *IOP Conference Series Materials Science and Engineering* 32 (2012), 1–8.
68. Mango and Hawkins, 'The apse mosaics of St. Sophia', 134 and 135.
69. I. Andreescu-Treadgold and W. T. Treadgold, 'Procopius and the imperial panels of S. Vitale', *Art Bulletin* 79 (1997), 708–23, at 714.
70. P. A. Underwood, 'A preliminary report on some unpublished mosaics in Hagia Sophia: season of 1950 of the Byzantine Institute', *American Journal of Archaeology* 55 (1951), 367–70.
71. See A. M. Giusti, 'The chancel mosaics', in ed. A. Paolucci, *Il Battistero di San Giovanni a Firenze/The Baptistery of San Giovanni, Florence* (Modena, 1994), vol. 2, 268, and Giusti, 'The vault mosaics', in *ibid.* 283 (for the text, dated to 1301).
72. P. J. Nordhagen, 'The penetration of Byzantine mosaic technique into Italy in the sixth century', in *Atti del 3 Colloquio internazionale sul mosaic antico e medieval* (Ravenna, 1983), 210–22, at 211, citing Oskar Wulff on this point.
73. Andreescu-Treadgold, 'The mosaic workshop at San Vitale', 31–41.
74. P. J. Nordhagen, 'The technique of Italian mosaics of the fourth and fifth centuries AD', *Antichità altoadriatiche* 13 (1979), 259–65, quoting Wulff with approval at 122.
75. Winfield, *Byzantine Mosaic Work*.
76. Andreescu-Treadgold, 'The mosaic workshop', esp. 34–5.
77. *Ibid.*; Terry and Maguire, *Dynamic Splendor*, 65 and 83–5.
78. Terry and Maguire, *Dynamic Splendor*, 83–7 for scallops of the main apse and virgins on the intrados.
79. This is laid out by Andreescu-Treadgold, 'The mosaics of Venice and the Venetian lagoon', 200–4.
80. See L. Becker, C. Kondoleon, R. Newman and M. T. Wypyski, 'The Atrium House Triclinium', in eds. L. Becker and C. Kondoleon, *Arts of Antioch: Art Historical and Scientific Approaches to Roman Mosaics and a Catalogue of the Worcester Art Museum Antioch Collection* (Worcester, Mass., 2005), 17–80.
81. Andreescu-Treadgold, 'The mosaic workshop'.
82. Terry and Maguire, *Dynamic Splendor*, 83–7.
83. As Winfield and Winfield, *Proportion and Structure*, 124, suggest.
84. This discussion is lifted from Mango and Hawkins, 'The apse mosaics of St. Sophia', 123–4.
85. Underwood, *Kariye Djami*, vol. 1, 178.
86. *Ibid.* 180. In the Pammakaristos, H. Belting, 'The style of the mosaics', in eds. H. Belting, C. Mango and D. Mouriki, *The Mosaics and Frescoes of St. Mary Pammakaristos* (Washington, DC, 1978), 89, suggests that this was because the artist was an icon painter rather than a mosaicist by trade and also sees the areas with paint as somehow inferior. There is no reason for either supposition: everything discussed in this chapter suggests that mosaicists could have dealt with paint and implies that it is unlikely any artist only worked in one medium.
87. See comments in Mouriki, *Nea Moni*, 95; also Cormack, 'The talented Mr Hawkins', 508.
88. H. Torp, 'La technique des mosaïques de la Rotonde de Thessaloniki', *Arte medievale* 4 (2014), 267–80, suggests that the heads of the martyrs at the Rotunda could have been made by specialised artists away from the site.
89. Winfield, *Byzantine Mosaic Work*, 26, makes the same point about a competent setter making the joins invisible.
90. Illustrated in ed. A. Lazaridou, *Transition to Christianity: Art of Late Antiquity, 3rd–7th century AD* (New York, 2011), cat. 143, p. 170.
91. As Ernest Hawkins always said: Cormack, 'The talented Mr Hawkins', 508, and indeed to me.
92. Winfield, *Byzantine Mosaic Work*, 23.
93. Chequerboarding was highlighted as a technique by Demus, *Byzantine Mosaic Decoration*, 38.
94. Mango and Hawkins, 'The apse mosaics of St. Sophia', 120, describe the robe as turquoise, cobalt blue, dark blue and black, at times pure black, at times purplish-black. On the use of colours, see B. Kiilerich, 'Optical colour blending in the Rotunda mosaics at Thessaloniki', *Musiva e sectile* 8 (2011), 63–92.
95. Discussed in more detail in L. James, *Light and Colour in Byzantine Art* (Oxford, 1996), 8–9.
96. See the description of P. Hills, *The Light of Early Italian Painting* (New Haven, 1987), 29–31.
97. Mouriki, *Nea Moni*, 238.
98. Nordhagen, 'The mosaics of John VII', and E. J. W. Hawkins, 'Further observations on the narthex mosaic in St. Sophia at Istanbul', *DOP* 22 (1968), 151 + 153–66.
99. See the discussion of N. Schibille, 'A quest for wisdom: the sixth-century mosaics of Hagia Sophia and Late Antique aesthetics', in eds. C. Entwistle and L. James, *New Light on Old Glass: Recent Research on Byzantine Mosaics and Glass* (London, 2013), 53–9, and N. Schibille, *Hagia Sophia and the Byzantine Aesthetic Experience* (Farnham, 2014), esp. 109–25.
100. Mango and Hawkins, 'The apse mosaics of St. Sophia', saying that silver was used in gold backgrounds only from the eighth century, 125, 133, 141; discussion in Terry and Maguire, *Dynamic Splendor*, 97. And, although I haven't been able to get hold of it, P. J. Nordhagen, 'Gli effetti prodotti dall'uso dell'oro, dell'argente et de altri materiali nell'arte musiva dell'alto medioevo', in *Colloquio del Sodalizio*, second series, 4 (1973–74), 143–55, sounds interesting.
101. H. L. Kessler, *Seeing Medieval Art* (Peterborough, Ont., 2004), 30.
102. E. J. W. Hawkins, 'The conservation of the mosaics at the Kariye Camii', *Studies in Conservation* 5 (1960), 102–7.
103. *Pace* Winfield, *Byzantine Mosaic Decoration*, 28. E. Borsook, 'Rhetoric or reality: mosaics as expressions of a metaphysical idea', *Mitteilungen des Kunsthistorischen Institutes in Florenz* 44 (2000), 9.

104. George, *The Church of Saint Eirene*, 52–4.
105. Schibille, *Hagia Sophia*, 61.
106. *Ibid.* 123–4.
107. See the collection of papers on light, several dealing with mosaic, in eds. D. Mondini and V. Ivanovici, *Manipolare la luce in epoca premoderna/Manipulating Light in Premodern Times* (Mendrisio, 2014).
108. Terry and Maguire, *Dynamic Splendor*, 97.
109. Procopius, *Buildings*, I, 1, 54–5, text and tr. H. B. Dewing, *Procopius,* vol. 7: *Buildings* (Cambridge, Mass., 1940).
110. N. Schibille, 'The use of light in the church of Hagia Sophia in Constantinople: the church reconsidered', in ed. P. Draper, *Current Work in Architectural History: Papers Read at the Annual Symposium of the Society of Architectural Historians of Great Britain, London 2004* (London, 2005), 43–8, took measurements of light within the great sixth-century church of Hagia Sophia in Istanbul to show how light levels changed within the building over the course of a day and throughout the year, and demonstrated how the deliberate placing and sizing of windows was a factor in this. Also see N. Schibille, 'Astronomical and optical principles in the architecture of Hagia Sophia in Constantinople', *Science in Context* 22 (2009), 27–46. Similarly, see T. Antonakaki, 'Lighting and spatial structure in religious architecture: a comparative study of a Byzantine church and an early Ottoman mosque in the city of Thessaloniki', *Proceedings of 6th International Space Syntax Symposium Istanbul 2007*, no. 57.
111. C. Nesbitt, 'Shaping the sacred. Light and worship', *Byzantine and Modern Greek Studies* 36 (2012), 139–60.
112. *Ibid.*
113. A. Piotrowski, 'Architecture and the Iconoclast controversy', in eds. B. A. Hanawalt and M. Kolbiaka, *Medieval Practices of Space* (Minneapolis, 2000), 101–27, and A. Piotrowski, *Architecture of Thought* (Minneapolis, 2011), ch. 1.
114. F. Dell'Acqua, 'Enhancing luxury through stained glass, from Asia Minor to Italy', *DOP* 59 (2005), 193–211.
115. A. H. S. Megaw, 'Notes on recent work of the Byzantine Institute in Istanbul', *DOP* 17 (1963), 333–71, and in contrast, J. Lafond, 'Découverte de vitraux historiés du moyen âge à Constantinople', *CahArch* 18 (1968), 231–8.
116. C. Nesbitt, 'Experiencing the light. Byzantine church window glass and the aesthetics of worship', in eds. Entwistle and James, *New Light on Old Glass*, 207–16; C. Bolgia, 'New light on the "Bright Ages". Experiments with mosaics and light in medieval Rome', in eds. Entwistle and James, *New Light on Old Glass*, 217–28.
117. The *typikon* for the Pantokrator Monastery is translated by R. Jordan in ed. J. Thomas and A. C. Hero, *Byzantine Monastic Foundation Document: A Complete Translation of the Surviving Founders' Typika and Testaments* (Washington, DC, 2000), vol. 2, 725–81.
118. According to Mango and Hawkins, 'The apse mosaics of St. Sophia', 148.
119. *Ibid.* 32–5.

3 THE BUSINESS OF MOSAICS

1. K. Dunbabin, *Mosaics of the Greek and Roman World* (Cambridge, 1999), and useful discussion there. Why this is so is unknown.
2. *Ibid.* 274.
3. Pliny, *Natural History* 36, 184.
4. M. Vassilaki, 'From the "anonymous" Byzantine artist to the "eponymous" Cretan painter', in ed. M. Vassilaki, *To Portraito tou kallitechne sto Byzantio* (Heraklion, 1997), 161–209. The ninety-eight artists are listed in ed. A. Kazhdan et al., *The Oxford Dictionary of Byzantium* (Oxford, 1991), s.v. 'Artist'.
5. The psalter is the so-called Uspenskij Psalter in the St Petersburg library, codex grec 216. A. Frolow, 'Le peintre Thomas de Damas et les mosaïques du Saint Sépulchre', *Bulletin d'études orientales* 11 (1945–46), 121–30. Frolow gives the text as 'πρέποντα κόσμον τῷ θεηδόχῳ τάφῳ/ τέτευχε τήνδε λαμπρὰν ὑελουργίαν/ Θωμᾶς μονάζων, ζωγράφος, Δαμασκόθεν'. I have not seen the manuscript and so cannot comment further.
6. For details, A. Cutler, 'Ephraim, mosaicist of Bethlehem: the evidence from Jerusalem', *Jewish Art* 12–13 (1986–87), 179–83; L.-A. Hunt, 'Art and colonialism: the mosaics of the Church of the Nativity in Bethlehem (1169) and the problem of "Crusader" art', *DOP* 45 (1991), 69–85 and on Zan, 74 and n.33.
7. O. Grabar, *The Shape of the Holy* (Princeton, 1996), accepted this reading; also see H. Stern, 'Recherches sur la Mosquée al-Aqsa et sur ses mosaïques', *Ars Orientalis* 5 (1963), 44, and the interpretation of M. Gautier-van Berchem not on the inscription but on the Fatimid restorations in her essay 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque in Damascus', in K. A. C. Creswell, *Early Muslim Architecture*, vol. 1: *Umayyads AD 622–750*, with a contribution on the mosaics of the Dome of the Rock in Jerusalem and of the Great Mosque in Damascus by Marguerite Gautier-van Berchem (Oxford, 1932–40; second edition Oxford, 1969; page references are to the second edition), 308.
8. So I am advised by Jeremy Johns, to whom I am very grateful. On Islamic mosaic, see the entry 'fusayfisa' by G. Marçais in ed. H. A. R. Gibb et al., *Encyclopaedia of Islam* (Leiden, 1960–2009, second edition), vol. 2, 955–7.
9. Figures taken from C. Hydes, 'Italian mosaic art 1270–1529', unpublished PhD thesis, University of Sussex, 2017.
10. A. M. Giusti, 'The chancel mosaics', in ed. A. Paolucci, *Il Battistero di S. Giovanni a Firenze/The Baptistery of S. Giovanni, Florence* (Modena, 1994), 268 and Giusti, 'The vault mosaics', in *ibid.* 283 (for the text, dated to 1301).
11. M. Constantoudaki-Kitromilides, 'A fifteenth-century Byzantine icon-painter working on mosaics in Venice.

Unpublished documents', *Jahrbuch der Österreichischen Byzantinistik* 32 (1982), 265–72.

12. See O. Demus, *The Mosaics of San Marco in Venice*, 2 vols. in 4 (Chicago, 1984), vol. 1, 6 and vol. 2, 220–2.
13. L. Fumi, *Il Duomo di Orvieto* (Rome, 1891); some of the documents are well discussed by C. Harding, 'The production of medieval mosaics: the Orvieto evidence', *DOP* 43 (1989), 73–102.
14. Harding, 'The production of medieval mosaics', 84–90.
15. This argument and the evidence for it in this paragraph comes from C. Bolgia, 'Mosaics and gilded glass in Franciscan hands: "professional" friars in thirteenth- and fourteenth-century Italy', in eds. P. Binski and E. A. New, *Patrons and Professionals in the Middle Ages: Proceedings of the 2010 Harlaxton Symposium*, Harlaxton Medieval Studies 22 (Donington, 2012), 141–66.
16. *De diversis artibus*, prologue. Also see the discussion in H. L. Kessler, *Seeing Medieval Art* (Peterborough, Ont., 2004), esp. 57.
17. Text in ed. G. D. Mansi, *Sacrorum conciliorum nova et amplissima collectio* (Graz, 1960–61 reprint), XIII, 252, and tr. in C. Mango, *Art of the Byzantine Empire: Sources and Documents* (Toronto, 1974), 172–3. See also the trio of articles on art and Orthodoxy by L. Brubaker, L. James and R. Cormack in eds. A. Louth and A. Cassiday, *Byzantine Orthodoxies* (Aldershot, 2006), 95–120.
18. See L. Robert, 'Inscriptions grecques de Sidè', *Revue de philology* 32 (1958), 48–9; H. Stern, 'Origine et debuts de la mosaïque murale', *Études d'archéologie classique* 2 (1959), 109 and n.5 on *musivius*, noting an inscription from Tralles that uses μουσόω to mean decorated with wall mosaic (see *Athenische Mitteilungen* 8 (1883), 329); C. Balmelle and J. P. Darmon, 'L'artisan-mosaïste', in ed. X. Barral I Altet, *Artistes, artisans et production artistique au moyen âge*, 3 vols. (Paris, 1986–90), vol. 1, looks at ways in which floor mosaicists sign themselves and words they use; A. Cutler, 'The right hand's cunning: craftsmanship and the demand for art in Late Antiquity and the early Middle Ages', *Speculum* 72 (1997), 971–94; E. Sironen, *The Late Roman and Early Byzantine Inscriptions of Athens and Attica* (Helsinki, 1997), covering 267/8 to *c.* 600, notes the epitaph of Julianus the mosaic worker – τεχνης κέντητης.
19. This is the suggestion made by Cyril Mango in E. J. W. Hawkins, M. C. Mundell and C. Mango, 'The mosaics of the monastery of Mār Samuel, Mār Simeon, and Mār Gabriel near Kartmin with a note on the Greek inscription', *DOP* 27 (1973), 296, who also proposes that it was made by someone unfamiliar with Greek (which raises an interesting issue about the 'origins' of the mosaicists as 'Constantinopolitan'). Mango states that pavement mosaics tended to be described as ψήφωσις.
20. *Bibliotheca hagiographica graeca* (Brussels, 1957), no. 1541m. A.-M. Talbot, 'The posthumous miracles of St Photeine', *Analecta Bollandiana* 112 (1994), 85–104: ch. 7. In chapter 8, the painters (ζωγράφοι) fall off their ladders and are saved – they are (unhelpfully as far as we are concerned) 'embellishing the ceiling with their art': with what is not recorded. The *Miracles* are dated to the eleventh or twelfth centuries. For the Greek text see *Hagiographica inedita decem*, ed. F. Halkin (Turnhout, 1989), text 9, 11–125, specifically at 120 and 121.
21. A. Barbet, 'Quelques rapports entre mosaïques et peintures murales à l'époque romaine', in *Mosaïque: recueil d'hommages à Henri Stern* (Paris, 1982), 43–53.
22. P. A. Underwood, *The Kariye Djami* (Princeton, 1975), vol. 4, 172; S. H. Young, 'Relations between Byzantine mosaic and fresco technique. A stylistic analysis', *Jahrbuch der Österreichischen Byzantinistik* 25 (1976), 269–78.
23. J.-P. Sodini, 'L'artisinat urbain dans l'époque paléochrétienne (4th–7th siècle)', *Ktema* 4 (1979), 71–119.
24. Important studies such as Sodini, 'L'artisinat urbain' and ed. Barral I Altet, *Artistes, artisans et production*, vol. 2, look at the social and legal standing of craftsmen without reference to wall mosaics and glass-making.
25. P. Allison, '"Painter-workshops" or "decorators' teams"?', *Mededelingen van het Nederlands Institut te Rome* 54 (1995), 98–109.
26. Dunbabin, *Mosaics*; M. Donderer, *Die Mosaizisten der Antike und ihre wirtschaftliche und soziale Stellung: eine Quellenstudie* (Erlangen, 1989).
27. *Codex Theodosianus* 13, 4, 2: *Le Code Théodosien. Texte latin d'après l'édition de Mommsen (1904)*; intro. P. Jaillette; tr. S. Crogiez-Pétrequin, P. Jaillette and J.-M. Poinsotte, with J.-P. Callu, A. Laquerrière-Lacroix and P. Laurence (Turnhout, 2009); *Codex Justinianus* 10, 66, 1. Also in Mango, *Art of the Byzantine Empire*, 15. Also Sodini, 'L'artisinat urbain', esp. 107 and 92–4 on glassworkers.
28. Dunbabin, *Mosaics.*
29. S. Vryonis, 'Byzantine Δημοκρατία and the guilds in the eleventh century', *DOP* 17 (1963), 287–314; also see H. Buchwald, 'Job site organization in thirteenth-century Byzantine buildings', in ed. S. Cavaciocchi, *L'edilizia prima della rivoluzione industrial secc. 13–18* (Rome, 2004), 625–67, at 643.
30. The material for this section comes from L. Fumi, *Statuti e regesti dell'Opera di Santa Maria di Orvieto: raccolti e pubblicati nel sesto centenario dalla fondazione del Duomo* (Rome, 1891), and Harding, 'The production of medieval mosaics'.
31. Buchwald, 'Job site organization'.
32. The architect Lorenzo Maitani was *capomaestro* at Orvieto Cathedral in 1310 and his contract specifically mentions his responsibility for the decoration of the façade.
33. A point made by Bolgia, 'Mosaics and gilded glass'.
34. 'Pictor et magister vitri et operis musaichi', in Fumi, *Duomo di Orvieto*, 123, doc. 54.
35. For whom see E. M. Stern, 'Roman glassblowing in a cultural context', *American Journal of Archaeology* 103 (1999), 441–84.
36. For Constantine V, see Theophanes, *Chronographia*, AM 6258 (765–6); ed. C. de Boor (Leipzig, 1883–85); tr. C. Mango and R. Scott, *The Chronicle of Theophanes*

Confessor: Byzantine and Near Eastern History AD 284–813 (Oxford, 1997), 608. For the Geniza: S. D. Goitein, *Studies in Islamic History and Institutions* (Leiden, 1966), ch. 13, 'The working people of the Mediterranean area during the high middle ages', 264–7. For Honorius: *Regesta Honorii*, Liber 2, epist. 864; see P. Pressuti, *Regesta Honorii Papae III* (Hildesheim and New York, 1978), vol. 1, 173.

37. Talbot, 'St Photeine'.
38. A. Cutler, 'The industries of art', in *EHB*, vol. 2, 557–61.
39. *Narratio de S. Sophia* 4, 7; text and tr. A. Berger, *The Patria* (Cambridge, Mass., 2013).
40. Harding, 'Production of medieval mosaics', and Buchwald, 'Job site organisation', both favour itinerant artists; Sodini, 'L'artisinat urbain', raises important questions about the relationship between artisans and the state, their place in society, the state of their technology, legal status and organisation, their role in the city. He too sees (floor) mosaicists as itinerant. Goitein, *Studies in Islamic Social History*, notes that the Geniza documents reveal the great mobility of craftsmen. In these documents, glass and glass-working seems very much a Jewish preserve, something that Byzantine texts also imply.
41. R. Ousterhout, *Master Builders of Byzantium* (Princeton, 1999); however, C. Bouras, 'Master craftsmen, craftsmen and building activities in Byzantium', in *EHB*, vol. 2, 539–54, thinks the reverse but gives no reasons.
42. Bouras, 'Master craftsmen'.
43. Ousterhout, *Master Builders.*
44. Buchwald, 'Job-site organisation'.
45. Poreč: A. Terry and H. Maguire, *Dynamic Splendor: The Wall Mosaics in the Cathedral of Eufrasius at Poreč*, 2 vols. (Philadelphia, 2007), vol. 1, 80–2; Harding 'Production of medieval mosaics', 81 and n.74.
46. *Book of the Eparch*, ch. 22, 1 and 2: *To Eparchikon vivlion = The Book of the Eparch* with an introduction by Ivan Dujčev (London, 1970), 60–1 for the Greek text and 268–9 for the translation.
47. *Book of the Eparch*, ch. 22, 4.
48. See Bouras, 'Master craftsmen', 540 and n.2.
49. J. Goldberg, *Trade and Institutions in the Medieval Mediterranean* (Cambridge, 2012), 106.
50. *Paterikon of the Cave Monastery Kiev*, ch. 4; tr. in Mango, *Art of the Byzantine Empire*, 221–2. H. Witte, 'Studies in Byzantine glass mosaics from Amorium', in C. Entwistle and L. James, *New Light on Old Glass: Recent Research on Byzantine Mosaics and Glass* (London, 2013), 25–32, suggests that the Kiev traders were more probably taking the tesserae for enamels or bead making.
51. Goitein, *Studies in Islamic History*, 421 n.65 and 335.
52. Cutler, 'The industries of art', 560.
53. On ship sizes see M. McCormick, 'Movements and markets in the first millennium: information, containers and shipwrecks', in ed. C. Morrisson, *Trade and Markets in Byzantium* (Washington, DC, 2012), 95–6.
54. M. McCormick, *Origins of the European Economy: Communications and Commerce AD 300–900* (Cambridge, 2001), 103–10.
55. M. McCormick, 'The imperial edge: Italo-Byzantine identity, movement and integration AD 650–950', in eds. H. Ahrweiler and A. Laiou, *Studies on the Internal Diaspora of the Byzantine Empire* (Washington, DC, 1998), 17–52. Also see the discussion of C. Morrisson and J. P. Sodini, 'The sixth-century economy', in *EHB*, vol. 2, 206–9; H. Mor, 'The socio-economic implications for ship construction: evidence from underwater archaeology and the *Codex Theodosianus*', in eds. R. Gertwagen and E. Jeffreys, *Shipping, Trade and Crusade in the Medieval Mediterranean* (Farnham, 2012), 39–64.
56. J. G. Harper, 'The provisioning of marble for the sixth-century churches of Ravenna: a reconstructive analysis', in eds. R. L. Cotella, M. J. Gill, L. A. Jenkins and P. Lamers, *Pratum Romanum: Richard Krautheimer zum 100. Geburtstag* (Wiesbaden, 1997), 131–48.
57. McCormick, 'The imperial edge', suggests that travel between Italy and Constantinople could take anything between 30 and 100 days – it is 900 km as the crow flies between Bari and Constantinople; 1,300 from Syracuse and from Istria.
58. Figures taken from P. Spufford, *Power and Profit: The Merchant in Medieval Europe* (London, 2002), 198–203.
59. On issues around the ease of transport and trade, see McCormick, *Origins*; Spufford, *Power and Profit*, esp. chs. 4 and 5.
60. C. Lightfoot and E. A. Ivison, 'Concluding remarks', in M. A. V. Gill, *Amorium Reports: Finds 1, the Glass (1987–1997)* (Oxford, 2002), 262–4, also suggesting itinerant mosaicists and citing ed. A. Kazhdan et al., *The Oxford Dictionary of Byzantium*, 'Mosaic', 1412–13. J. Witte-Orr, 'Fresco and mosaic fragments from the Lower City Church', in ed. C. Lightfoot, *Amorium Reports II. Research Papers and Technical Reports* (Oxford, 2003), 143, says that the 23,000 or more tesserae recovered perhaps made up 1 per cent of the total required. Also see Witte, 'Studies in Byzantine glass mosaics', 25–32.
61. Lightfoot and Ivison, 'Concluding remarks', 259–64, though they feel it plausible that everyday glassware would be of local manufacture. Also C. Lightfoot, 'Business as usual? Archaeological evidence for Byzantine commercial enterprise at Amorium in the seventh to eleventh centuries', in ed. Morrisson, *Trade and Markets*, 177–92, esp. 189 on the resources brought in for church decoration.
62. Spufford, *Power and Profit.*
63. On models for luxury trade see A. Laiou, 'Regional networks in the Balkans in the Middle and Late Byzantine periods', in ed. Morrisson, *Trade and Markets*, 125.
64. M. Mundell Mango, 'Byzantine trade: local, regional, interregional and international', in ed. M. M. Mango, *Byzantine Trade, Fourth to Twelfth Centuries* (Farnham, 2009), 3–14, is a good stage-setter for debates about elitist and/or luxury commodities. See also J.-M. Carrié, 'Were Late Roman and Byzantine economies market economies? A comparative look at historiography', in ed. Morrisson *Trade and Markets*, 13–26.
65. *Patria* 3, 43; ed. Berger, *Patria*, 164–5.

66. On the marble trade, N. Asgari, 'The Proconnesian production of architectural elements in Late Antiquity, based on evidence from the marble quarries', in ed. C. Mango and G. Dagron, *Constantinople and its Hinterland* (Aldershot, 1995), 263–88; Harper, 'The provisioning of marble'; on the silk trade and the importance of silk as a commodity with huge economic value, see C. Hilsdale, *Byzantine Art and Diplomacy in an Age of Decline* (Cambridge, 2012).
67. Goldberg, *Trade and Institutions*, 339.
68. Goldberg, *Trade and Institutions.*
69. C. Harding, 'Economic dimensions in art: mosaic versus wall-painting in Trecento Orvieto', in eds. P. Denley and C. Elam, *Florence and Italy: Renaissance Studies in Honour of Nikolai Rubinstein* (London, 1988), 503–11. Four times is Harding's estimate in 'Production of medieval mosaics', 73.
70. D. Kinney, 'Spolia from Baths of Caracalla in Sta Maria in Trastevere', *Art Bulletin* 68 (1986), 379–97; M. Greenhalgh, *Marble Past, Monumental Present* (Leiden, 2009).
71. Chorikios, *Laudatio Marciani* 2, 36; tr. in Mango, *Art of the Byzantine Empire*, 69.
72. Paul the Silentiary, *Description of Hagia Sophia*, line 673. Ed. P. Friedländer, *Johannes von Gaza und Paulus Silentarius* (Leipzig and Berlin, 1912); Italian tr. and commentary M. L. Fobelli, *Un tempio per Giustiniano: Santa Sofia di Constantinopoli e le 'Descrizione' di Paolo Silenziario* (Rome, 2005).
73. J. DeLaine, *The Baths of Caracalla: A Study in the Design, Construction, and Economics of Large-Scale Building Projects in Imperial Rome* (Portsmouth, RI, 1997); Sodini, 'L'artisanat urbain', says that marble was imported from Proconnesus and Iasos to Ravenna for churches, notably S. Vitale.
74. DeLaine, *The Baths of Caracalla*.
75. M. Greenhalgh, 'Spolia: a definition in ruins', in eds. R. Brilliant and D. Kinney, *Reuse Value: Spolia and Appropriation in Art and Architecture, from Constantine to Sherrie Levine* (Aldershot, 2011), suggests that the reuse of materials such as marble in cities such as Rome was less about resurrecting past glories and more about a liking for marble and for what marble stood for in a general sense.
76. *P Oxy*, vol. 45, no. 3265 and Stern, 'Roman glassblowing', 458.
77. A. Burford, *Craftsmen in Greek and Roman Society* (London, 1972), 143–4; Dunbabin, *Mosaics*, 275–6. DeLaine, *The Baths of Caracalla*, 208, on problems with use of the *Price Edict*; Stern, 'Roman glassblowing', 461–5.
78. *Price Edict* 16, 1–6: Latin and Greek texts and tr. in Stern, 'Roman glassblowing', 462, table 1, and also in D. Whitehouse, 'Glass in the Price Edict of Diocletian', *Journal of Glass Studies* 46 (2004), 189–91.
79. D. Barag 'Recent important epigraphic discoveries related to the history of glassmaking in the Roman period', *Annales du 10e Congrès de l'Association internationale pour l'histoire du verre* (Amsterdam, 1987), 109–16, for greenish and decolourised; DeLaine, *The Baths of Caracalla*, for 'colourless' and coloured; Whitehouse, 'Glass in the *Price Edict*', establishing that Judaean glass really was from Judaea.
80. Stern, 'Roman glassblowing', 463, does the maths. She points out that the *Edict*'s prices are lower than those of the Cairo Geniza documents of the thirteenth century.
81. *Price Edict* 16, 7–9; see Stern, 'Roman glassblowing' for the text at 462, and translation and discussion at 466–7.
82. Pliny, *Natural History* 33, 19, 61: 'cuius unciae in septengenas quinquagenas pluresque bratteas quarternam utroque digitorum spargantur'.
83. Cennino D'Andrea Cennini, *The Craftsman's Handbook: The Italian 'Il libro dell'arte'*, tr. D. V. Thompson, Jr. (New Haven, 1960), ch. 138, 84–5.
84. M. Verità, 'Technology and deterioration of vitreous mosaic tesserae', *Reviews in Conservation* 1 (2000), 68; E. Neri and M. Verità, 'Glass and metal analyses of gold leaf tesserae from 1st to 9th century mosaics. A contribution to technological and chronological knowledge', *Journal of Archaeological Science* 40 (2013), 4596–606; E. Neri, M. Verità, I. Biron and M. F. Guerra, 'Glass and gold: analyses of 4th–12th centuries Levantine mosaic tesserae. A contribution to technological and chronological knowledge', *Journal of Archaeological Science* 70 (2016), 158–71, at 159, suggest some very similar figures. D. Bomford, J. Dunkerton, D. Gordon and A. Roy, *Art in the Making: Italian Painting before 1400* (London, 1990), 22, discuss Cennini's recommendation that one florin could be hammered out to provide a hundred gold leaves (though, Cennini adds, it is possible to get up to 145 leaves from a florin). If each leaf of gold is assumed to be about 8 cm square, its weight would be about 0.033 g and it would be some 269 μm thick. I Roncuzzi Fiorentini, 'L'effeto oro sulle parete musive', in ed. R. Farioli Campanati, *AISCOM* 1 (Ravenna, 1994), 125–31, gives 0.5–1 μm; also see her figures in 'Les smalts à fond d'or et d'argent dans les mosaïques anciennes', in ed. Campanati, *Il mosaico antico*, 563–70.
85. J. Caillet, 'Les prix de la mosaïque de pavement 4–6 siècle', in *VI Coloquio internacional sobre mosaic antique* (Palencia, 1993), p.
86. J.-C. Cheynet, E. Malamut and C. Morrisson, 'Prix et salaires a Byzance (X–XV siècle)', in eds. V. Kravari, J. Lefort and C. Morrisson, *Hommes et richesses dans l'empire byzantin*, 2 vols. (Paris, 1989–91), vol. 2, 339–74, with its useful charts for equivalences of coinage in this period and tables for prices of land, wine, animals, slaves, houses, grain, soldiers, salaries.
87. Assuming a consistent rate of 2,400 denarii to the solidus or nomisma. For the stone cutter see C. Morrisson and J.-C. Cheynet 'Prices and wages in the Byzantine world', in *EHB*, vol. 2, 815–78, at 864, and their other useful tables of wages.
88. 1 lira = 1 florin in the 1250s; 7 lira = 1 florin by 1500; 1 lira = 20 soldi: M. O'Malley, *The Business of Art: Contracts and the Commissioning Process in Renaissance Italy* (New Haven, 2005), 13
89. See O'Malley, *Business of Art*, 298 and n.41.

90. M. Mundell Mango, 'Beyond the amphora: non-ceramic evidence for Late Antique industry and trade', in eds. S. Kingsley and M. Decker, *Economy and Exchange in the East Mediterranean during Late Antiquity* (Oxford, 2001), 87–107, esp. table 5.1.
91. *Price Edict*, Section 35, which is incomplete. W. Scheidel, 'The shape of the Roman world', *Princeton/Stanford Working Papers in Classics* (www.princeton.edu/~pswpc/papers/authorMZ/scheidel/scheidel.html), is interesting on costs and building within the empire, using the Stanford Geospatial Network Model of the Roman World.
92. DeLaine, *The Baths of Caracalla.* Cutler, 'The industries of art', 559, citing H. Logvin, *Kiev's Hagia Sophia* (Kiev, 1971), 16, suggested that one man could cover 4 square metres a day and thus that the mosaics in Kiev would have taken one man one month, but four men one week, though these figures seem like guesswork.
93. See DeLaine, *The Baths of Caracalla*, table 20 on 182.
94. For Lythrankomi, A. H. S. Megaw and E. J. W. Hawkins, *The Church of the Panagia Kanakariá at Lythrankomi in Cyprus: Its Mosaics and Frescoes* (Washington, DC, 1977); for Hagia Sophia, the plans of R. L. Van Nice, *Saint Sophia in Istanbul: An Architectural Survey* (Washington, DC, 1965–86).
95. A. Antonaras, 'Glassware in Late Antique Thessalonike', in eds. L. Nasrallah, C. Bakirtzis and S. J. Friesen, *From Roman to Early Christian Thessalonike* (Cambridge, Mass., 2010), 325, does similar calculations for the Rotunda but uses slightly different premises.
96. DeLaine, *The Baths of Caracalla*, 181 and 216. DeLaine took the highest price from the *Price Edict*, the 24 denarii per libra for Alexandrian glass, as her figure for coloured glass.
97. All figures have been consistently rounded up.
98. 9,925 square metres is the figure calculated by M. M. Mango, 'The monetary value of silver revetments and objects belonging to churches, AD 300–700', in eds. S. A. Boyd and M. M. Mango, *Ecclesiastical Silver Plate in Sixth-Century Byzantium* (Washington, DC, 1992), 125–6. V. François and J.-M. Spieser, 'Pottery and glass in Byzantium', *EHB*, vol. 2, 595, take the average weight of a tessera at 5 g and so calculate that 400 tonnes of glass would have been required. They do not explain from where the estimate of 5 g is derived; 1.5 g is closer to the average of published weights of tesserae.
99. See M. Hendy, *Studies in the Byzantine Monetary Economy c. 330–1450* (Cambridge, 1990), 164–201, with these figures at 172. I have used a rate of 72 solidi to the pound of gold, taken from *ODB*, vol. 3, 'solidus', 1924.
100. Hendy, *Studies*, 200.
101. Morrisson and Cheynet, 'Prices and wages', 859.
102. *Ibid*.
103. C. Mango and E. J. W. Hawkins, 'The mosaics of St. Sophia at Istanbul. The Church Fathers in the North Tympanum', *DOP* 26 (1972), 1 and 3–41, at 22, and the further conclusions drawn by Cutler, 'The industries of art', 560.
104. DeLaine, *The Baths of Caracalla*, 193.
105. *Ibid.* 193–4.
106. Suggested by Cyril Mango in a lecture and cited by M. Mundell Mango and J. Henderson, 'Glass at medieval Constantinople: preliminary scientific evidence', in eds. G. Dagron and C. Mango, *Constantinople and its Hinterland* (Aldershot, 1995), 333–58, at 339 n.24.
107. Mango, 'Monetary value', 125–6, takes a 2 micron thickness of gold on the tesserae. A. Cutler and J. Nesbitt, *L'arte bizantina e il suo pubblico* (Turin, 1986), 106, use the same figure to estimate 13 lb for the apse.
108. Taking, as Table 5 does, 328.9 g to the Roman pound and 72 solidi to the Roman pound.
109. Morrisson and Cheynet 'Prices and wages', 855; *LP* 1, 271, Hormisdas.
110. Morrisson and Cheynet, 'Prices and wages', 859.
111. P. Delogu, 'Oro e argente in Roma', in *Cultura e società nell'Italia medieval: studi per Paolo Brezzi* (Rome, 1988), vol. 1, 273–93, produces a series of very interesting charts showing the quantities of gold and silver donated by popes between *c.* 600 and 900.
112. A. Cutler, 'Art in Byzantine society: motive forces of Byzantine patronage', *Jahrbuch der Österreichischen Byzantinistik* 31 (1984), 759–87.
113. Hendy, *Studies in the Byzantine Monetary Economy*, 201; A. Cutler, 'Uses of luxury: on the functions of consumption and symbolic capital in Byzantine culture', in ed. J. Durand, *Byzance et les images* (Paris, 1994), 287–328; for Julius Argentarius, see Agnellus, *Book of Pontiffs*, ch. 59: text in *Agnelli Ravennatis Liber pontificalis ecclesiae Ravennatis*, ed. D. M. Deliyannis (Turnhout, 2006), 226 and tr. D. M. Deliyannis, *Agnellus of Ravenna, The Book of Pontiffs of the Church of Ravenna*, 172; also see S. Barnish, 'The wealth of Iulianus Argentarius: Late Antique banking and the new economy', *Byzantion* 55 (1985), 5–38, who suggests that Argentarius' income was perhaps 20,000 solidi (278 pounds of gold) per annnum, superior to official salaries but not close to senatorial wealth.

4 THE VALUE OF MOSAICS

1. I must acknowledge that 'the medieval world' was not a homogenous entity and that, by taking a broad-brush approach here, differences at all levels, local, regional, religious and temporal, will be smoothed over to an extent. Short of another book, there is no way round this.
2. *Life of Basil*, 84, 87, 89: *Chronographiae quae Theophanis Continuati nomine fertur liber quo vita Basilii Imperatoris amplectitur*, ed. and tr. I Ševčenko (Berlin, 2011).
3. R. Cormack, 'Away from the centre: "provincial" art in the ninth century', in ed. L. Brubaker, *Byzantium in the Ninth Century: Dead or Alive?* (Aldershot, 1998), 161.

R. Ousterhout, 'Reconstructing ninth-century Constantinople', in *ibid.* 129, on the issues inherent in the building programme of the *Life of Basil.*

4. Michael Psellos, *Chronographia*, VI.186: ed. D. R. Reinsch, *Michaelis Pselli Chronographia* (Berlin, 2014); tr. E. R. A. Sewter, *Fourteen Byzantine Rulers: The Chronographia of Michael Psellus* (London, 1966).
5. For Daniel, see J. Wilkinson, *Jerusalem Pilgrims before the Crusades* (Warminster, 1977), 127; for Stephen, G. P. Majeska, *Russian Travelers to Constantinople in the Fourteenth and Fifteenth Centuries* (Washington, DC, 1984), 42 and 43.
6. The first quotation is from al-Muqaddasi, writing in *c.* 985, the translation taken from M. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque in Damascus', in K. A. C. Creswell, *Early Muslim Architecture*, vol. 1: *Umayyads, AD 622–750* (second edition, Oxford, 1969), part 1, 233; the second is the scholar al-Tha'labi writing in the eleventh century and cited by F. B. Flood, *The Great Mosque of Damascus: Studies on the Making of an Umayyad Visual Culture* (Leiden, 2001), 5.
7. 'Unspeakable brightness' is St Polyeuktos as described in *Greek Anthology* 1, 10, 53–5 (tr. W. R. Paton, revised M. A. Tueller, *The Greek Anthology: Volume I, Books 1–5* (Cambridge, Mass., 2014); 'dazzling appearance' is Eusebios, *Ecclesiastical History* 10, 4, 43. 'Glittering stream' is Paul the Silentiary, *Description*, lines 668–72; 'shining stars' is used of the Cathedral at Edessa: A. Palmer, 'The inauguration anthem of Hagia Sophia in Edessa: a new edition and translation with historical and architectural notes and a comparison with a contemporary Constantinopolitan kontakion', *Byzantine and Modern Greek Studies* 12 (1988), stanza 5, 131.
8. 'Metallic veins': St Polyeuktos as described in *Greek Anthology* 1, 10, 60–4; 'gleaming' is Photios on the marbles of the Pharos church, *Homily* 10, 4 (text in ed. B. Laourda, *Phōtiou Homiliai* (Thessaloniki, 1959)); 'translucent' is Leo VI, Sermon 28 on the Monastery of Kauleas, and 'like flowers' is Leo VI, Sermon 34 on the church built by Stylianos Zaoutzas, for which see ed. T. Antonopoulou, *Leonis VI sapientis imperatoris Byzantini homiliae* (Turnhout, 2008). Also see B. Kiilerich, 'The aesthetic viewing of marble in Byzantium: from global impression to focal attention', *Arte medievale* 2 (2012), 9–28.
9. Procopius, *Buildings*, I, 1, 30–1 (tr. H. B. Dewing, *Procopius, Buildings* (Cambridge, Mass., 1940). The computer-generated images in L. O. Grobe, O. Hauck and A. Noback, 'Das Licht in der Hagia Sophia – eine Computersimulation', in eds. F. Daim and J. Drauschke, *Byzanz: das Romerreich im Mittelalter, Monographien des römisches-germanischen Zentralmuseums 84*, 2.1 (Mainz, 2011), 97–111, show something of the brightness.
10. Theophanes Continuatus, Book 6, ch. 33 (ed. I. Bekker, *Theophanes continuatus: Ioannes Cameniata, Symeon Magister, Georgius monachus* (Bonn, 1838), 456) and translation in C. Mango, *Art of the Byzantine Empire: Sources and Documents* (Toronto, 1974), 209.
11. Shining light and marbles is Sidonius Apollinaris, *Epistles* 2, 10 to Hesperius on the church in Lyons (tr. W. B. Anderson, *Poems and Letters* (Cambridge, Mass., 1956–65)); Paulinus of Nola, *Epistle* 32, ch. 10 (tr. P. G. Walsh, *Letters of St. Paulinus of Nola* (Westminster, MD, 1966–67)); Jerome, *Letter* 52, ch. 10, to Nepotian, using it in a negative sense (*Lettres*: ed. and tr. J. Labourt (Paris, 1949–63), vol. 2). This aesthetic is discussed by M. Roberts, *The Jewelled Style* (Ithaca, NY, 1989). Also see D. Janes, *God and Gold in Late Antiquity* (Cambridge, 1998).
12. Text and tr. in E. Thunø, *The Apse Mosaic in Early Medieval Rome: Time, Network, and Repetition* (Cambridge, 2015), 211–12.
13. E. Borsook, 'Rhetoric or reality: mosaics as expressions of a metaphysical idea', *Mitteilungen des Kunsthistorischen Institutes in Florenz* 44 (2000), 3–18. The inscription at S. Agnese talks of capturing daylight; that at S. Venantius about capturing daylight. E. Thunø, 'Inscription and divine presence: golden letters in the early medieval apse mosaic', *Word and Image* 27 (2011), 279–91; E. Thunø, 'Inscriptions on light and splendour from St Denis to Rome and back', *ActaNorv* 24 (2011), 139–59; Thunø, *The Apse Mosaic*.
14. The quotation is from al-Muqaddasi, the translation that of Gautier-van Berchem, 'The mosaics of the Dome of the Rock', 233. Also see Flood, *The Great Mosque of Damascus*, 1, 5.
15. See the discussion in E. Swift and A. Alwis, 'The role of Late Antique art in early Christian worship: a reconsideration of the iconography of the "starry sky" in the "Mausoleum" of Galla Placidia', *Papers of the British School at Rome* 78 (2010), 193–217; B. Schellewald, 'Transformation and animation. Light and mosaic in St Catherine's Monastery on Mt Sinai', in eds. D. Mondini and V. Ivanovici, *Manipolare la luce in epoca premoderna/ Manipulating Light in Premodern Times* (Mendrisio, 2014), 237–52; P. Reuterswärd, 'Windows of divine light', in ed. D. Rosand, *Interpretazioni Veneziane: studi di storia dell'arte in onore di Michelangelo Muraro* (Venice, 1984), 77–83.
16. On the importance of blue and gold in the Islamic world, see A. George, *The Rise of Islamic Calligraphy* (London, 2010); A. George, 'Calligraphy, colour and light in the Blue Qu'ran', *Journal of Qu'ranic Studies* 11 (2009), 75–125; E. Khamis, 'Two wall mosaic inscriptions from the Umayyad market place in Bet Shean/Baysan', *Bulletin of the School of Oriental and African Studies* 64 (2001), 159–76, on the mosaic inscription from Baysan (724–43); M. Milwright, *The Dome of the Rock and its Umayyad Mosaic Inscription* (Edinburgh, 2016).
17. L. James, *Light and Colour in Byzantine Art* (Oxford, 1996); N. Schibille, *Hagia Sophia and the Byzantine Aesthetic Experience* (Farnham, 2014); J. Gage, *Colour and Culture* (London, 1993); P. Hills, *The Light of Early Italian Painting* (New Haven, 1987); P. Hills, *Venetian Colour: Marble, Mosaic, Painting and Glass, 1250–1550* (New Haven, 1999); J Gage, 'Colour in history: relative and absolute', *Art History* 1 (1978), 104–30.

18. Ptolemy, *Optics* 2, 92–6: see A. Lejeune, *L'Optique de Claude Ptolémée, dans la version latine d'après l'arabe de l'émir Eugène de Sicile* (Leiden, 1989, reprint of 1956), 58–61; A. M. Smith, *Ptolemy's Theory of Visual Perception: An English Translation of the 'Optics'* (Philadelphia, 1996), 108–10.
19. See James, *Light and Colour*.
20. For the change in tone of Roman inscriptions see Borsook, 'Rhetoric or reality'.
21. Tabulated by P. Delogu, 'Oro e argente in Roma', in *Cultura e società nell'Italia medieval: studi per Paolo Brezzi* (Rome, 1988), vol. 1, 273–93.
22. As does Agnellus on the churches of Ravenna: see ed. D. M. Deliyannis, *Agnelli Ravennatis Liber pontificalis ecclesiae Ravennatis* (Turnhout, 2006) and tr. D. M. Deliyannis, *The Book of Pontiffs of the Church of Ravenna* (Washington, DC, 2004); and Paul the Silentiary in his account of Hagia Sophia: *Description of Hagia Sophia*, in ed. P. Friedländer, *Johannes von Gaza und Paulus Silentarius* (Leipzig and Berlin, 1912); Italian tr. and commentary M. L. Fobelli, *Un tempio per Giustiniano: Santa Sofia di Constantinopoli e le 'Descrizione' di Paolo Silenziario* (Rome, 2005).
23. Paul, *Description*, lines 617–46; Constantine of Rhodes, ed. L. James, *Constantine of Rhodes, On Constantinople and the Church of the Holy Apostles*, including a new Greek edition by Ioannis Vassis (Farnham, 2012), lines 650–74. A range of other authors and other texts engage with marbles: see, for example, Eusebios, *Vita Constantini*, 3, 31, 36, 37 (tr. A. M. Cameron and S. G. Hall, *Life of Constantine* (Oxford, 1999)); Chorikios, *Laudatio Marciani* 1, 41–4 (ed. R. Förster, *Choricii Gazaei opera* (Leipzig, 1929)), the *Life of Basil*, 89, *Digenis Akrites*, book 7, lines 47–58 (ed. and tr. E. Jeffreys, *Digenis Akritis: The Grottaferrata and Escorial Versions* (Cambridge, 1998)).
24. Mark the Deacon, *Life of Porphyry*, 75 and 84 (tr. G. F. Hill, *The Life of Porphyry, Bishop of Gaza* (Oxford, 1913)).
25. *Life of Basil*, 87, 89; Photios, *Homily* 10, 5.
26. On the symbolic value of glass, see M. Beretta, *The Alchemy of Glass: Counterfeit, Imitation and Transmutation in Ancient Glassmaking* (Sagamore Beach, Mass., 2009).
27. Constantine of Rhodes, lines 751–891.
28. Nikolaos Mesarites, 'Description of the Church of the Holy Apostles in Constantinople', text, tr. and commentary G. Downey, *Transactions of the American Philosophical Society* NS 47.6 (1957), ch. 14, 8 (Pantokrator's robe), ch. 17, 2 (grey garment), ch. 34, 7 (red blood); James, *Light and Colour*, 114–15.
29. Janes, *God and Gold*.
30. Gregory, *Regula pastoralis*, 21, 7.
31. *The Life of St. Basil the Younger*, 43, ed. and tr. D. F. Sullivan, A.-M. Talbot and S. McGrath (Washington, DC, 2014), 254–5.
32. Hesychius, *Homily V, De S Maria deipara 1*; ed. M. Aubineau, *Les homélies festales d'Hésychius de Jérusalem* (Brussels, 1980), vol. 1, 158; also see the discussion of A. Terry and H. Maguire, *Dynamic Splendor: The Wall Mosaics in the Cathedral of Eufrasius at Poreč* (Philadelphia, 2007), 139–40.
33. Qur'an 24:35. See the discussion in Flood, *The Great Mosque of Damascus*, 44–7.
34. Nikolaos Mesarites, 'Description of the Church of the Holy Apostles in Constantinople', ch. 12; Leo VI, Sermon 28 on the Monastery of Kauleas.
35. Jerome, Letter 52, ch. 10 (to Nepotian: text and tr. in A. Cain, *Jerome and the Monastic Clergy: A Commentary on Letter 52 to Nepotian* (Leiden, 2013), 48 and 49); Bernard of Clairvaux, *Apologia ad Guillelmum abbatem*, 12, 28: text is available in eds. J. Leclerq and H. M. Rochais, *S. Bernardi Opera* (Rome, 1963), vol. 3, 81–108, the quotation coming from 105. The translation is that of M. Casey, 'St Bernard's *Apologia* to Abbot William', in *The Works of Bernard of Clairvaux* (Spencer, Mass., 1970), vol. 1, Treatises 1, 33–72, at 65. Also see C. Rudolph, *The 'things of greater importance': Bernard of Clairvaux's Apologia and the Medieval Attitude toward Art* (Philadelphia, 1990).
36. Qur'an 9:34. G. H. A. Juynboll, 'The attitude towards gold and silver in early Islam', in ed. M. Vickers, *Pots and Pans: A Colloquium on Precious Metals and Ceramics*, Oxford Studies in Islamic Art 3 (Oxford, 1986), 107–15.
37. For descriptions of Byzantine buildings see R. Macrides and P. Magdalino, 'The architecture of ekphrasis: construction and context of Paul the Silentiary's ekphrasis of Hagia Sophia', *Byzantine and Modern Greek Studies* 12 (1988), 47–82; L. James and R. Webb, '"To understand ultimate things and enter secret places": ekphrasis and art in Byzantium', *Art History* 14 (1991), 3–17.
38. This is apparent in texts ranging from Eusebios in the fourth century on the church at Tyre (*Historia ecclesiae*, 10, 4, 37 (tr. K. Lake, *The Ecclesiastical History* (London, 1926–32)), and Chorikios on St Stephen in Gaza in the sixth (*Laudatio Marciani* 2, 28–54), to Photios in the ninth century on the Pharos Church (*Homily* 10), Constantine of Rhodes in the tenth on the Holy Apostles, and Nikolaos Mesarites some two centuries later on the same church.
39. Photios, *Homily* 10, 5.
40. In this way the envoys of Vladimir of Kiev reported on the Hagia Sophia experience, as angels seemed to descend from the mosaics to join in the celebration of the liturgy: *The Russian Primary Chronicle: Laurentian Text*, tr. and ed. S. H. Cross and O. P. Sherbowitz-Wetzor (Cambridge, Mass., 1953), ch. 108, 111.
41. For these accounts, see C. Mango, *Materials for the Study of the Mosaics of St. Sophia at Istanbul* (Washington, DC, 1962).
42. By Ignatius Monachos. The Greek text is available as *Narratio de imagine Christi in monasterio Latomi*, in ed. A. Papadopoulos-Kerameus, *Varia graeca sacra* (St Petersburg, 1909, repr. Leipzig, 1975), 102–13; partial English translation is in Mango, *Art of the Byzantine Empire*, 155–6.

43. Photios, *Homily* 17. In his *The Homilies of Photios, Patriarch of Constantinople: Translation and Commentary* (Cambridge, Mass., 1958), 284, Mango suggested that the apse Virgin was not the image described by Photios; in his article with Ernest Hawkins, C. Mango and E. J. W. Hawkins, 'The apse mosaics of St. Sophia at Istanbul. Report on work carried out in 1964', *DOP* 19 (1965), 143–4, he explained why the mosaic must be the image discussed by the patriarch.
44. Photios, *Homily* 10, 6.
45. These are discussed in some detail in Chapter 8. For Damascus, the texts are discussed by Gautier-van Berchem, 'The mosaics of the Dome of the Rock', esp. 229–45, as a response to Gibb's position: H. A. R. Gibb, 'Arab–Byzantine relations under the Umayyad Caliphate', *DOP* 12 (1958), 219–34, texts on 225. Also see A. Cutler 'Gifts and gift exchange as aspects of the Byzantine, Arab and related economies', *DOP* 55 (2001), 247–78. For the Great Mosque in Cordoba see P.-A. Jaubert, *La géographie d'Edrisi* (Paris, 1999; reprint of Paris 1836–40), vol. 2, 60, and J. D. Dodds, 'The great mosque of Córdoba', in ed. J. D. Dodds, *Al-Andalus: The Art of Islamic Spain* (New York, 1992), 22.
46. Qur'an 22:23.
47. See the discussion of Flood, *The Great Mosque of Damascus*, 31.
48. As argued by George, *The Rise of Islamic Calligraphy*.
49. Gregory the Great, *Letter* to Bishop Serenus of Marseille: book 11, letter 10, in ed. D. Norberg, *S. Gregorii Magni Registrum epistularum* (Turnhout, 1982), 873–6.
50. Constantine of Rhodes, lines 748–50.
51. K. Weitzmann, 'The mosaic in St. Catherine's monastery on Mount Sinai', in Weitzmann, *Studies in the Arts at Sinai* (Princeton, 1982), 5–18.
52. For a cogent discussion of how philosophy and theology were perhaps less significant than economics, politics and social pressures, see P. Crossley, 'Medieval architecture and meaning: the limits of iconography', *Burlington Magazine* 130 (1988), 116–21.
53. Gregory of Nyssa, *De deitate filii et spiritus sancti, PG* 46, 557.
54. In the Prologue to book 1 of his *De diversis artibus*, the artist-monk Theophilus urges his fellow artists to be thankful in the Lord for their skills, which are inspired by God: *De diversis artibus*, ed. and tr. C. R. Dodwell (Oxford, 1961). H. L. Kessler, *Seeing Medieval Art* (Peterborough, Ont., 2004), offers a good introduction to these issues and the differences between East and West.
55. On Theodulf, see A. Freeman, *Theodulf of Orléans: Charlemagne's Spokesman against the Second Council of Nicaea* (Aldershot, 2003).
56. On Iconoclasm see L. Brubaker and J. Haldon, *Byzantium in the Iconoclast Era c. 680–850: The Sources: An Annotated Survey* (Aldershot, 2001); L. Brubaker and J. Haldon, *Byzantium in the Iconoclast Era c. 680–850: A History* (Cambridge, 2011).
57. For the dimensions and a description of the mosaic, see Mango and Hawkins, 'The apse mosaics of St. Sophia'. The Greek text of Photios' homily, *Homily* 17, on the mosaic is published in ed. Laourda, *Photios, Homilies* and translated in Mango, *Homilies of Photios*, 286–96.
58. Photios, *Homily* 17, 2; translation from Mango, *Homilies of Photios*, 290.
59. For this concept, see James and Webb, '"To understand ultimate things and enter secret places"', 11–13; R. Webb, 'The aesthetics of sacred space: narrative, metaphor and motion in *ekphraseis* of church buildings', *DOP* 53 (1999), 69; R. S. Nelson, 'The discourse of icons, then and now', *Art History* 12 (1989), 144–57, on the links between the image and the beholder.
60. On Byzantine faith, M. Cunningham, *Faith in the Byzantine World* (Oxford, 2002).
61. Nikephoros, *Antirrheticus* 3, 3, *PG* 100 381C–384B and *Apologeticus* 61, *PG* 100, 749–52.
62. The phrase is Nikolaos Mesarites', 'Description of the Church of the Holy Apostles', ch. 12. For a definition of ekphrasis, see R. Webb, 'Ekphrasis ancient and modern: the invention of a genre', *Word and Image* 15 (1999), 11–15; R. Webb, 'Ekphrasis, amplification and persuasion in Procopius' *Buildings', Antiquité tardive* 8 (2000), 67–71, esp. 68–9; L. Brubaker, 'Perception and conception: art, theory and culture in ninth-century Byzantium', *Word and Image* 5 (1989), 19–32. For a contrasting view that it was 'mere' rhetoric, see the comments of Beat Brenk, 'Discussion', in eds. E. Borsook, F. Gioffredi Superbi and G. Pagliarulo, *Medieval Mosaics: Light, Color, Materials* (Milan, 2000), 180.
63. V. Dimitropoulou, 'Giving gifts to God: aspects of patronage in Byzantine art', in ed. L. James, *A Companion to Byzantium* (Oxford, 2010), 161–70.
64. On these themes for women patrons see L. Brubaker, 'Memories of Helena: patterns in imperial female matronage in the fourth and fifth centuries', in ed. L. James, *Women, Men and Eunuchs: Gender in Byzantium* (London, 1997), 52–75, and L. James, *Empresses in Early Byzantium* (London, 2001), 26–49.
65. O. Demus, *Byzantine Mosaic Decoration* (London, 1948).
66. E. Kitzinger, 'Mosaic decoration in Sicily under Roger II and the classical Byzantine system of church decoration', in ed. W. Tronzo, *Italian Church Decoration of the Middle Ages and Early Renaissance: Functions, Forms and Regional Traditions* (Bologna, 1989), 147–65; E. Kitzinger, 'Reflections on the Feast Cycle in Byzantine art', *CahArch* 36 (1988), 51–74.
67. L. James, 'Monks, monastic art, the sanctoral cycle and the middle Byzantine church', in eds. M. Mullett and A. Kirby, *The Theotokos Evergetis and Eleventh-Century Monasticism* (Belfast, 1994), 162–75.
68. *Ibid.* 163–4. H. Maguire, 'The cycle of images in the church', in ed. L. Safran, *Heaven on Earth: Art and the Church in Byzantium* (Philadelphia, 1998), 121–51, shows how Hosios Loukas and Daphni use their images in different ways both to evoke the core Christian message and to make site-specific points.

69. Demus, *Byzantine Mosaic Decoration*; Germanos, patriarch of Constantinople in the eighth century, expressed these ideas in his *Historia ecclesiastica*, 1: 'The church is an earthly heaven in which the supercelestial God dwells and walks about. It represents the crucifixion, burial and resurrection of Christ' (text and tr. J. Meyendorff, *St Germanus of Constantinople, On the Divine Liturgy* (New York, 1984), 56–7.
70. Demus, *Byzantine Mosaic Decoration*, 5.
71. T. F. Mathews, 'The sequel to Nicaea II in Byzantine church decoration', *Perkins Journal* 41 (1988), 11–21, also discussing the role that the liturgy and the Second Church Council of Nikaea played in shaping church decoration.
72. A. M. Yasin, *Saints and Church Spaces in the Late Antique Mediterranean: Architecture, Cult, and Community* (Cambridge, 2009).
73. Constantine of Rhodes, lines 922–5; also H. Maguire, *Art and Eloquence in Byzantium* (Princeton, 1981) and the comments of James and Webb, '"To understand ultimate things and enter secret places"', 9–11.
74. For example, A. Lidov, 'Christ the Priest in Byzantine church decoration of the eleventh and twelfth centuries', in *XVIIIth International Congress of Byzantine Studies: Selected Papers. Moscow, 1991,* vol. 3: *Art History, Architecture, Music* (Shepherdstown, WV, 1996), 158–70, and A. Lidov, 'Byzantine church decoration and the schism of 1054', *Byzantion* 68 (1998), 381–405; for Nea Moni, see the contrasting views of W. Tronzo, 'Mimesis in Byzantium: notes towards a history of the function of the images', *RES* 25 (1994), 61–76, and C. Barber, 'Mimesis and memory in the narthex mosaics at the Nea Moni, Chios', *Art History* 24 (2001), 323–37.
75. C. Hahn, 'Inscriptions and interactions: text and image on the Cloisters Cross and other ivories', *ActaNorv* 24 (2011), 185–204.
76. Mathews, 'The sequel to Nicaea II'.
77. 'Social glue' is the phrase of J. F. Romano, *Liturgy and Society in Early Medieval Rome* (Aldershot, 2014), 6.
78. Kessler, *Seeing Medieval Art*, 34.
79. Demus, *Byzantine Mosaic Decoration.*
80. *Ibid.*
81. By, for example, B. Brenk, 'Zum Bildprogramm der Zenokapelle in Rom', *Archivio español de arqueología* 45–7 (1972–74), 213–22; O. Demus, *The Mosaics of Norman Sicily* (London, 1949); O. Demus, *The Mosaics of San Marco in Venice*, 2 vols. in 4 (Chicago, 1984).
82. This is recorded in the Iconophile *Vita St Stephen Iunioris*, ch. 29, *La vie d'Etienne le Jeune par Etienne le Diacre*, ed. and tr. M.-F. Auzépy (Aldershot, 1997), 126–7 and 221–2.
83. *The Letter of the Three Patriarchs*, ch. 6a, mentioning ζωγαφικαῖς ἱστορίαις καὶ μουσοθργικοῖς ψηφίοις, in ed. J. A. Munitiz et al., *The Letter of the Three Patriarchs to Emperor Theophilus and Related Texts* (Camberley, 1997), 24–5.
84. Also see A. Cutler, 'Under the sign of the Deēsis: on the question of representativeness in medieval art and literature', *DOP* 41 (1987), 154.

INTRODUCTION TO PART II

1. See the discussions of E. Diez and O. Demus, *Byzantine Mosaics in Greece: Hosios Lucas and Daphni* (Cambridge, Mass., 1931).
2. On the one hand, A. H. S. Megaw, 'Byzantine architecture and decoration in Cyprus: metropolitan or provincial?', *DOP* 28 (1974), 57–88; on the other, L. Zavagno, 'At the edge of two empires. The economy of Cyprus between Late Antiquity and the Early Middle Ages (650s–800s AD)', *DOP* 65 and 66 (2011–12), 121–56.
3. C. Dauphin, 'Mosaic pavements as an index of prosperity and fashion', *Levant* 12 (1980), 112–34, is a useful comparative article mapping floor mosaics. A. Arbeiter and D. Korol, 'Wand- und Gewölbemosaiken von Tetrarchischer Zeit bis zum frühen 8. Jahrhundert: neue funde und forschungen', in eds. R. Harreither, P. Pergola, R. Pillinger and A. Pülz, *Acta Congressus Internationalis XIV Archaeologiae Christianae* (Vienna, 2006), 45–86, is a very useful bringing together of information for the third to eighth centuries.
4. Accessible at www.sussex.ac.uk/byzantine/mosaic/.
5. R. Ousterhout, 'Conceptualising the late churches of Constantinople: suggested methodologies and a few examples', *DOP* 54 (2000), 241–50, at 241, citing Cyril Mango.
6. Invaluable is M. Andaloro and S. Romano, *La pittura medievale a Roma 312–1431, Corpus e atlante* (Milan, 2006), of which *Corpus*, vols. 1 (312–468) and 4 (1050–1198) and *Atlante*, vol. 1 (covering the regions of the Vatican, Suburbio and Rione Monti) have so far been published. The five volumes of R. Krautheimer, *Corpus Basilicarum Christianarum Romae: The Early Christian Basilicas of Rome (IV–IX cent.)* (Vatican City, 1937–77), are also useful, though focused on architecture. The classic two volumes of G. Matthiae, *Pittura romana del medioevo* (Rome, 1965–66 and republished 1987–88), tend to focus on style.
7. This is an assumption that has carried much weight throughout the twentieth century. It has led to a remarkable argument that the existence of something (say a programme of mosaics in S. Prassede) prefigures its existence in Byzantium (as with the 'classical' programme of Byzantine mosaic decoration) and that it was their future existence in Byzantium that allowed them to exist in Rome. See also Peter Brown's critique of these attitudes in his 'Eastern and Western Christendom in Late Antiquity: a parting of the ways', in P. Brown, *Society and the Holy in Late Antiquity* (London, 1982), 166–95, especially 171–2.
8. See also the discussion of Ousterhout, 'Conceptualising the late churches of Constantinople'.
9. Andaloro/Romano A1, C1, C4, C5.
10. For ideas of Christian communities see eds. W. Pohl, C. Gantne and R. Payne, *Visions of Community in the Post-Roman World: The West, Byzantium and the Islamic World, 300–1100* (Farnham, 2012).

11. E. R. Hoffman, 'Pathways of portability: Islamic and Christian interchange from the tenth to the twelfth century', *Art History* 24 (2001), 17–50.

5 IN THE BEGINNING

1. For the mosaics see H. Stern, 'Les mosaïques de l'église de Sta Costanza à Rome', *DOP* 12 (1958), 159–218; Andaloro/Romano A1, 59–66; Andaloro/Romano C1, 53–85; H. Brandenburg, *Ancient Churches of Rome from the Fourth to the Seventh Century* (Turnhout, 2005), 69–85.
2. K. M. D. Dunbabin, *Mosaics of the Greek and Roman World* (Cambridge, 1999), 26–7, 248–9.
3. For the building, see M. J. Johnson, *The Roman Imperial Mausoleum in Late Antiquity* (Cambridge, 2009), 139–56, dating it to the fourth century. For it as built by Constantius II, W. E. Kleinbauer, 'Sta Costanza at Rome and the House of Constantine', *ActaNorv* 18 (2004), 55–70; G. Mackie, 'A new look at the patronage of Sta Costanza, Rome', *Byzantion* 67 (1997), 383–406. D. J. Stanley, 'New discoveries at Sta Costanza', *DOP* 48 (1994), 257–61; and 'Sta Costanza: history, archaeology, function, patronage and dating', *Arte medievale* 3 (2004), 119–40, argues for a fifth-century construction, a collaboration between Pope Innocent I and Theodosios II. For S. Costanza as pagan see K. Lehmann, 'Sta Costanza', *Art Bulletin* 37 (1955), 193–6.
4. F. B. Sear, *Roman Wall and Vault Mosaics* (Heidelberg, 1977), 29–30. W. Oakeshott, *The Mosaics of Rome* (London, 1967), 65, suggests a difference in date between the 'pagan' and Christian mosaics.
5. Pliny, *Natural History* 36, 189; Seneca, *Epistle* 86, 6; Statius, *Silvae* 1, 5, 42.
6. Dunbabin, *Mosaics.*
7. C. Boschetti, 'Vitreous materials in early mosaics in Italy: faience, Egyptian blue, and glass', *Journal of Glass Studies* 53 (2011), 59–91
8. See the examples in Dunbabin, *Mosaics*, 247–8.
9. See for example the green carpet mosaics from Daphni and now in the Dumbarton Oaks Collection (BZ.1938.75b): G. M. A. Richter, *Catalogue of Greek and Roman Antiquities in the Dumbarton Oaks Collection* (Cambridge, Mass., 1956), cat. 43 on p. 62 and pl. XXIVC; also see the ribbons and interlocking geometric patterns on a floor mosaic from Antioch: Cat. 38, p. 57 and pl. XXIVA.
10. H. P. L'Orange, 'The *adventus* ceremony and the slaying of Pentheus as represented in mosaics of about AD 300', in H. P. L'Orange, *Likeness and Icon: Selected Studies in Classical and Early Medieval Art* (Odense, 1973), 174–83.
11. Dunbabin, *Mosaics*, 236.
12. *Ibid.* 246.
13. C. Boschetti, C. Leonelli, M. Macchiarola, P. Veronesi, A. Corradi and C. Sada, 'Early evidences of vitreous materials in Roman mosaics in Italy: an archaeological and archaeometric integrated study', *Journal of Cultural Heritage* 9 (2008), www.sciencedirect.com/science/article/pii/S1296207408000903; Dunbabin, *Mosaics*, 247, on links with painting.
14. Dunbabin, *Mosaics*, 246.
15. *Ibid.* 237.
16. This is a really interesting topic about which little has been written, but there is not the space to do it justice here.
17. H. Lavagne, 'Le nymphée au Polyphème de la "Domus Aurea"', *Mélanges d'archéologie et d'histoire* 82 (1970), 673–721; T. Budetta, 'The mosaic-decorated nymphaeum of Massa Lubrense', *Musiva e Sectilia: An International Journal for the Study of Ancient Pavements* 2/3 (2005–6), 43–80.
18. Now in the Palazzo dei Conservatori in Rome. See Sear, *Roman Wall and Vault Mosaics*, cat. no. 123, colour pl. C, and eds. M. Cima and M. A. Tomei, *Vetri a Roma* (Rome, 2012), cat. no. 291, p. 35 and pl. 29.
19. See R. Ling, *Roman Painting* (Cambridge, 1991).
20. For details of the lost mosaics see Andaloro/Romano A1, 59–66.
21. Egyptian blue is a synthetic glassy pigment made from silica, calcium carbonate, natron and a copper compound, often malachite, made into a paste, fired, and rolled into pellets which could be ground down for pigment.
22. Sear, *Roman Wall and Vault Mosaics*, 39–43; Dunbabin, *Mosaics*, 238; Boschetti et al., 'Early evidences', in the context of *opus vermiculatum*.
23. Sear, *Roman Wall and Vault Mosaics*, 95.
24. T. Ashby, 'The Columbarium of Pomponius Hylas', *Papers of the British School at Rome* 5 (1910), 463–71; Sear, *Roman Wall and Vault Mosaics*, cat. no. 25, colour pl. A; H. Lavagne, *Operosa Antra: recherches sur la grotte à Rome de Sylla à Hadrien* (Rome, 1988), 408–9.
25. Boschetti, 'Vitreous materials', 81; for glass blowing see E. M. Stern, 'Roman glassblowing in a cultural context', *American Journal of Archaeology* 103 (1999), 442–50.
26. Lavagne, 'Nymphée au Polyphème', 721; Sear, *Roman Wall and Vault Mosaics*, 42. For gold tesserae from a mosaic under the Biblioteca Herziana: M. Bartoli, V. Cousi and F. Felici, 'Il mosaico parietale del ninfeo di Lucullo sotto il palazzo nuovo della Bibliotheca Herziana a Roma. Nuove acquisizioni e progretto di restauro', in ed. C. Angelelli, *AISCOM* 14 (Rome, 2009), 509–20.
27. J. DeLaine, *The Baths of Caracalla in Rome: A Study in the Design, Construction and Economics of Large-Scale Building Projects in Imperial Rome* (Portsmouth, RI, 1997).
28. Sear, *Roman Wall and Vault Mosaics*, cat. no. 61; Dunbabin, *Mosaics*, 241, 246.
29. For Optis and Leptis Magna, see Sear, *Roman Wall and Vault Mosaics*, cat. nos. 177–8; for Carthage, *ibid.*, cat. no. 194; for the Baths of Caracalla and of Diocletian in Rome: DeLaine, *The Baths of Caracalla*.
30. J. J. Wilkes, *Diocletian's Palace, Split* (Sheffield, 1986); S. Ćurčić, 'Late Antique palaces: the meaning of urban context', *Ars Orientalis* 23 (1993), 67–90.
31. Boschetti, 'Vitreous materials'.
32. *Ibid.*; C. Boschetti, C. Leonelli and A. Corradi, 'The earliest wall mosaics and the origin of Roman glass in Italy: archaeological considerations for an archaeometric

survey', in eds. D. Ignatiou and A. Antonaras, *Annales du 18e Congrès de l'Association internationale pour l'histoire du verre* (Thessaloniki, 2012), 139–44; Dunbabin, *Mosaics*, 236; F. B. Sear, 'The earliest wall mosaics in Italy', *Papers of the British School at Rome* 43 (1975), 83–97; H. Stern, 'Origine et debuts de la mosaïque murale', *Études d'archéologie classique* 2 (1959), 101–21.

33. Sear, 'The earliest wall mosaics', on shell mosaics as forerunners of glass wall mosaics.
34. Dunbabin, *Mosaics*, 237. Also see the elaborate decoration of the nymphaeum in the villa in Massa Lubrense described in Budetta, 'The mosaic-decorated nymphaeum'.
35. R. Coates-Stephens, 'Notes from Rome', *Papers of the British School at Rome* 76 (2008), 301.
36. See Sear, *Roman Wall and Vault Mosaics*, cat. nos. 14, 16, 26, 27, 29, 32, 34–8, 45, 48, 50, 51, 64–9, 71, 72; Dunbabin, *Mosaics*, 242–3.
37. E. Alföldi-Rosenbaum, 'External mosaic decoration on Late Antique building', *Frühmittelalterliche Studien* 4 (1970), 1–7.
38. H. Lavagne, '"Luxuria inaudita": Marcus Aemilius Scaurus et la naissance de la mosaïque murale', in *Mosaïque: recueil d'hommages à H. Stern* (Paris, 1983), 259–64.
39. C. Foss, 'Late Antique and Byzantine Ankara', *DOP* 31 (1977), 27–87; H. Lavagne, 'Le nymphée au Polyphème de la Domus Aurea', *Mélanges d'archéologie et d'histoire* 82 (1970), 673–721; Sear, *Roman Wall and Vault Mosaics*, cat. no. 61; Caracalla: DeLaine, *The Baths of Caracalla.*
40. Maximian's mausoleum and the evidence for mosaics: Johnson, *The Roman Imperial Mausoleum*, 73; Gamzigrad: *ibid.*, 79 and D. Srejović and Č. Vasić, *Imperial Mausolea and Consecration Memorials in Felix Romuliana (Gamzigrad, East Serbia)* (Belgrade, 1994); the Mausoleum of Diocletian may have had wall mosaics but there is no definite evidence: Johnson, *The Roman Imperial Mausoleum*, 68 and n.30. The early fourth-century Tor de'Schiavi: *ibid.*, 93.
41. See www.bbc.co.uk/news/world-europe-14356604; accessed 31 January 31 2012. For catacomb mosaics in Rome, see Andaloro/Romano C1, 92–6 (Ciriacus), 175–8 (Domitilla), 181 (cemetery of Apronianus), 182–3 (Ermete), 184–7 (Priscilla).
42. Sear, *Roman Wall and Vault Mosaics*, cat. nos. 112–18 (Mithraea); 152–62 (catacombs).
43. F. Bisconti, 'L'arcosolio mosaicato nelle catacomb di Domitilla: lineamenti iconografici', in eds. F. Guidobaldi and A. Paribeni, *AISCOM* 8 (Ravenna, 2001), 517–28.
44. Andaloro/Romano C1 253–8; B. Brenk, *The Apse, the Image and the Icon: An Historical Perspective of the Apse as a Space for Images* (Wiesbaden, 2010), 16.
45. Sear, *Roman Wall and Vault Mosaics.*
46. *Ibid.*; Stern, 'Origine et debuts'. Also see the discussion in L. James, 'Successors of Rome? Byzantine glass mosaics', in eds. D. Keller, J. Price and C. Jackson, *Neighbours and Successors of Rome* (Oxford, 2014), 128–36.
47. P. Hoffman, J. Hupe and K. Goethert, *Katalog der römischen Mosaike aus Trier und dem Umland* (Trier, 1999), cat. 11, 232 (plant scrolls on a gold ground, from the apse of the imperial basilica – recorded only in a drawing).
48. Whitehouse, 'Mosaics and painting', 1018. For Faragola: E. Gliozzo, A. Santagostino Barbone, M. Turchiano, I. Memmi and G. Volpe, 'The coloured *tesserae* decorating the vaults of the Faragola *balneum* (Ascoli Satriano, Foggia, southern Italy)', *Archaeometry* 54 (2012), 311–31.
49. V. Scheibelreiter, 'Mosaiken', in eds. H. Thür and E. Rathmayr, *Hanghaus 2 in Ephesos, Ephesos* VIII/9 (Vienna, 2014), 255–72; V. Scheibelreiter, 'Gold und Glas: Mosaiken aus Ephesos', in eds. S. Deger-Jalkotzy and N. Schindel, *Gold: Tagung anlässlich der Gründung des Zentrums Archäologie und Altertumswissenschaften an der Österreichischen Akademie der Wissenschaft, 19–29 April 2007* (Vienna, 2009), 87–97.
50. Brandenburg, *Ancient Churches*, 231.
51. Anemurium: M. Gough et al., 'Report of the Council of Management and of the Director for Anatolian Studies, 1966', *Anatolian Studies* 17 (1967), 3–23, and E. M. Stern, 'Ancient and medieval glass from the Necropolis Church at Anemurium', *Annales du 9e Congrès de l'Association internationale pour l'histoire du verre* (Nancy, 1985), 35–64; Kos: G. Aleura, S. Kalopisi, A. Laimou and M. Panagiotidi, 'Anaskapphi stin Kardamaina (archaia Alasarna) tis Ko', *Praktika tis en Athinais Arkhaiologikis Etairias* 145 (1990), 342–67; Çiftlik: S. Hill, 'Çiftlik', *Anatolian Studies* 45 (1995), 224–5; Meryemlik: E. Herzfeld and S. Guyer, *Meriamlik und Kerykos: zwei christliche Ruinenstätte der rauhen Kilikiens* (Manchester, 1930).
52. *Patria*, 3, 209; *The Patria of Constantinople*, text and tr. A. Berger (Cambridge, Mass., 2013), 222–3.
53. T. K. Thomas, 'Egyptian art of Late Antiquity', in ed. A. B. Lloyd, *A Companion to Ancient Egypt* (Oxford, 2010), 1032–64.
54. H. Whitehouse, 'Mosaics and painting in Greco-Roman Egypt', in ed. Lloyd, *Companion to Ancient Egypt*, 1018.
55. Eusebius of Caesarea, *Life of Constantine*, 3, 50: intro., tr. and commentary A. M. Cameron and S. G. Hall (Oxford, 1999), 140. John Malalas: *Chronographia*, 13, 30, ed. I. Thurn, *Ioannis Malalae Chronographia* (Berlin and New York, 2000); tr. E. Jeffreys, M. Jeffreys and R. Scott, *The Chronicle of John Malalas* (Melbourne, 1986), 184.
56. See for example Felix Fabri, *The Book of the Wanderings of Felix Fabri*, tr. A. Stewart (London, 1896), 589–91, on the Church of the Nativity and Helena; Niccolò of Poggibonsi, *A Voyage Beyond the Seas (1346–1350)*, tr. T. Bellorini and E. Hoade (Jerusalem, 1945, repr. 1993), ch. 58, 33 on the Cenacle.
57. Epiphanios of Salamis was one, in his Letter to the Emperor Theodosios; text in ed. G. Ostrogorsky, *Studien zur Geschichte des byzantinisches Bilderstreites* (Breslau, 1929), fr. 23–7, 71–2.
58. Andaloro/Romano C1, 126–30; J. Toynbee and J. Ward-Perkins, *The Shrine of St Peter* (London, 1956), 72–5; L. de Maria, 'Spunti di riflessione sul programma iconografico del Mausoleo dei Giulii nella Necropoli Vaticana', in

eds. F. Guidobaldi and A. Paribeni, *AISCOM* 6 (Ravenna, 2000), 385–96.

59. For Centcelles, see H. Schlunk and A. Arbeiter, *Die Mosaikkuppel von Centcelles* (Mainz, 1988), who say it is Constans; ed. J. Arce, *Centcelles: el monumento tardorromano: iconografía y arquitectura* (Rome, 2001); J. Arce, *Funus imperatorum: los funerales de los emperadores romanos* (Madrid, 1988), 115, says it was not Constans' mausoleum; and Johnson, *The Roman Imperial Mausoleum*, 129–39, is on the fence.
60. Schlunk and Arbeiter, *Die Mosaikkuppel*. For Centcelles as a mausoleum see Johnson, *The Roman Imperial Mausoleum*, 126–39.
61. B. Brenk, 'Visibility and (partial) invisibility of Early Christian images', in eds. G. de Nie, K. F. Morrison and M. Mostert, *Seeing the Invisible in Late Antiquity and the Early Middle Ages* (Brepols, 2005), 139–59.
62. Johnson, *The Roman Imperial Mausoleum*, 138.
63. Giorgio Vasari said this (Introduction to the *Lives of the Artists*, part 1, *On Architecture*, 1, 2), but that is no excuse for Oakeshott, *The Mosaics of Rome*, 61, to hint at it.
64. When S. Costanza was badly restored in 1620, the remaining dome mosaics were removed. There was also mosaic in the rectangular structure attached to the drum in front of the main niche.
65. Brenk, *The Apse*, 20. Also discussed in T. F. Mathews, *The Clash of Gods: A Reinterpretation of Early Christian Art* (Princeton, 1993, reprint 1999).
66. V. Vincenti, 'Mosaici parietali di Ostia', in eds. F. Guidobaldi and A. Paribeni, *AISCOM* 6 (Ravenna, 2000), 373–84.
67. Brenk, *The Apse*.
68. Andaloro/Romano A1, 193–202; Brandenburg, *Ancient Churches*, 20–36, with details of the rebuildings; O. Brandt, 'Constantine, the Lateran and early church building policy', *ActaNorv* 15 (2001), 109–14.
69. *LP*, Silvester; Brenk, *The Apse*, 50 and n.157. The *LP* is felt to have been a gradual and unsystematic compilation, perhaps begun in the fifth century, perhaps composed within papal circles. It is a mine of information for papal commissions but it must be understood as a partial and incomplete source. See the 'Introductions' to Raymond Davis' translations into English.
70. *LP*, Silvester; for Flavius Felix, see J. Hillner, 'Families, patronage, and the titular churches of Rome, c300–c600', in eds. K. Cooper and J. Hillner, *Religion, Dynasty and Patronage in Early Christian Rome, 300–900* (Cambridge, 2007), 225 and n.3.
71. By Brenk, *The Apse*.
72. Brandenburg, *Ancient Churches*, 94; H. Kessler, '"Caput et speculum omnium ecclesiarum": Old St Peter's and church decoration in medieval Latium', in ed. W. Tronzo, *Italian Church Decoration of the Middle Ages and Early Renaissance: Functions, Forms and Regional Traditions* (Bologna, 1989), 119–46, details how we know what little we know of Old St Peter's and then goes on to show the church's importance for other church decoration in Latium. R. Gem, 'The chronology of St Peter's basilica', in eds. R. McKitterick, J. Osborne, C. M. Richardson and J. Story, *Old Saint Peter's, Rome* (Cambridge, 2013), 35–64, sees the building of the church as a long process with remodelling in the reign of Constans and the apse mosaic as Constantius II.
73. Andaloro/Romano C1, 87–91; Andaloro/Romano A1, 21–44. P. Liverani, 'Saint Peter's, Leo the Great and the Leprosy of Constantine', *Papers of the British School at Rome* 76 (2008), 155–72, dates the triumphal arch to 325 or 326 and argues for the apse mosaic as Constantine's. See his n.10 at 157 for details of alternative dates. G. Bowersock, 'Peter and Constantine', in ed. W. Tronzo, *St Peter's in the Vatican* (Cambridge, 2005), 515, makes a case for Constans as the patron. Also T. F. Mathews, 'The piety of Constantine the Great in his votive offerings', *CahArch* 53 (2009–10), 5–16.
74. See the discussion and reconstruction of E. Thunø, *The Apse Mosaic in Early Medieval Rome* (Cambridge, 2015), 31–2.
75. H. Kessler, *Old St Peter's and Church Decoration in Medieval Italy* (Spoleto, 2002) on the influences of both St Peter's and S. Paolo *fuori le mura*.
76. For details see R. Krautheimer et al., *Corpus Basilicarum Christianarum Romae: The Early Christian Basilicas of Rome (IV–IX Centuries)*, 5 vols. (Rome, 1937–77), vol. 1, part 3, 165–94.
77. S. De Blaauw, *Cultus et decor: liturgia e architettura nella Roma tardoantica e medievale: Basilica Salvatoris, Sanctae Mariae, Sancti Petri* (Vatican City, 1994), 2 vols.: for St Peter's see 505, the Lateran, 388 n.3 and S. Maria Maggiore, 139 n.2.
78. N. Christie, *From Constantine to Charlemagne: An Archaeology of Italy, AD 300–800* (Aldershot, 2006), 98–107; also P. Liverani, 'L'edilizia costantiniana a Roma: il Laterano, il Vaticano, Santa Croce in Gerusalemme', in eds. A. Donati and G. Gentili, *Costantino il Grando: la civilità antica al bivio tra Occidente e Oriente* (Milan, 2005), 74–81.
79. Despite the suggestion of R. Krautheimer, *Rome: Profile of a City, 312–1308 AD* (Princeton, 2000), 24, that the Lateran and S. Croce played relatively little part in turning Rome into a Christian capital. For the place of St Peter's in Rome, see P. Liverani, 'St Peter's and the city of Rome between Late Antiquity and the early Middle Ages', in eds. McKitterick et al., *Old St Peter's*, 21–34; also, in the same volume, A. Thacker, 'Popes, emperors and clergy at Old Saint Peter's from the fourth to the eighth century', 137–56.
80. Andaloro/Romano C1, 366–410 and A1, 117–24; Brandenburg, *Ancient Churches*, 121; J. Leclaire, 'À propos des programmes iconographiques paléochrétiens et mediévaux de la basilique Saint-Paul-hors-les-murs à Rome', *CahArch* 52 (2005–8), 63–78, argues that first decoration of the triumphal arch was deployed at the instigation of the Theodosians and had the theme of the people of God/people of Rome; the fifth-century renovation of Leo the Great gave a central place for Peter in order to make points about the pope and papal standing.

81. *LP*, Silvester; also see P. Brown, 'Art and society in Late Antiquity', in ed. K. Weitzmann, *Age of Spirituality: A Symposium* (New York, 1980), 17–28, e.g. at 20.
82. Brandenburg, *Ancient Churches*, 16–17.
83. Hillner, 'Families', 225, of the empire 261.
84. Hillner, 'Families', discusses definitions of *tituli* churches. F. Marazzi, 'Rome in transition: economic and political changes in the fourth and fifth centuries', in ed. J. Smith, *Early Medieval Rome and the Christian West: Essays in Honour of Donald A. Bullough* (Leiden, 2000), 21–42, made the case that fourth-century trade continued on a large scale and people continued to build in Rome; the Forum and Palatine areas remained important and popes played a key role in reshaping the city fabric.
85. Andaloro/Romano A1, 307–14; Andaloro/Romano C1, 114–25; V. Tiberià, *Il mosaic di Sta Pudenziana a Roma: il restauro* (Rome, 2003): a destroyed inscription dated it to Innocent I, pope between 402 and 417; C. Angelelli, *La basilica titolare di S Pudenziano: nuove ricerche* (Vatican City, 2010).
86. It has been heavily restored. Tiberià, *Il mosaic di Sta Pudenziana*, says that the only original parts are the head of Peter, the wreath over it, parts of the portico roof and hexagonal building, the sky, the ox and the eagle.
87. A.-O. Poilpré, *Maiestas Domini: une image de l'église en occident V–IXe siècle* (Paris, 2005), sees it as an image of Christ the Word. It was used to reconstruct the Church of the Holy Sepulchre in Jerusalem by for example K. J. Conant, 'The original buildings at the Holy Sepulchre in Jerusalem', *Speculum* 31 (1956), 1–48, though J. G. Davies, 'Eusebius' description of the Martyrium at Jerusalem', *American Journal of Archaeology* 61 (1957), 171–3, felt the mosaic not to be useful in this context, a view with which I concur. For Peter and Paul, see L. Hodne, 'The "double apostolate" as an image of the church. A study of early medieval apse mosaics in Rome', *ActaNorv* 6 (2006), 141–62. Another interpretation of the mosaic is offered by O. Steen, 'The proclamation of the word. A study of the apse mosaic in Sta Pudenziana, Rome', *ActaNorv* 11 (1999), 85–114. For the importance of purple and imperial connotations – or not – see Mathews, *The Clash of Gods*, 101.
88. D. Kinney, 'The evidence for the dating of S Lorenzo in Milan', *Journal of the Society of Architectural Historians* 31 (1972), 92–107, and 96–7 on dating the mosaics; S. Lewis, 'San Lorenzo revisited: a Theodosian palace church at Milan', *Journal of the Society of Architectural Historians* 32 (1973), 197–222, prefers to see them as fifth century. For the Milanese mosaics and a discussion of the possibility of a Milanese workshop, see now E. Neri, Tessellata vitrea *tardoantichi e altromedievali: produzione dei materiali e loro messa considerazioni generali e studio dei casi milanesi* (Turnhout, 2016), the publication of her thesis of 2012. I regret that this important contribution was published just too late for me to include it properly in my discussions throughout this book.
89. C. Bertelli, 'I mosaici di S. Aquilino', in ed. G. A. Dell'Acqua, *La basilica di San Lorenzo in Milano* (Milan, 1985), 146–69; F. Monfrin, 'À propos de Milan chrétien: siège épiscopal et topographie chrétienne IV–VI siècles', *CahArch* 40 (1992), 7–46; D. Kinney, '"Capella Reginae": S Aquilino in Milan', *Marsyas* 15 (1970–71), 13–35. P. J. Nordhagen, 'The mosaics of the Cappella di S. Aquilino in Milan: evidence of restoration', *ActaNorv* 2 (1982), 77–94, sees the S. Aquilino mosaics as fifth century in their style and fourth in their iconography. Literary accounts make it clear that there were also mosaics on the dome and in other conches. See now Neri, Tessellata Vitrea *Tardoantichi e Altromedievali*.
90. See M. J. Johnson, 'On the burial places of the Valentinian dynasty', *Historia* 40 (1991), 501–6.
91. A. Calderini, G. Chierici and C. Cecchelli, *La Basilica Maggiore di S. Lorenzo in Milano* (Milan, 1951). Kinney, 'The evidence for the dating of S. Lorenzo', argues that S. Lorenzo was a palace church and therefore should be dated to 340–402 when Milan was the residence of the imperial court, and specifically to 355–74, the work of Auxentius.
92. P. Pariset, 'I mosaici del battistero di S. Giovanni in Fonte nello sviluppo della pittura paleocristina a Napoli', *CahArch* 20 (1970), 1–13.
93. Monfrin, 'À propos de Milan chrétien', contains useful maps with bishops' seats between the fourth and sixth centuries, showing a tremendous increase in number. Looking at them, it is surprising that mosaic is only known in Milan and Ravenna.
94. *Notitia dignitatum*, 229–43, ed. O. Seeck, *Notitia dignitatum: accedunt Notitia urbis Constantinopolitanae et laterculi prouinciarum* (Berlin, 1876); also R. Janin, *La géographie ecclésiastique de l'empire byzantin: le siège de Constantinople et le patriarcat œcuménique: les églises et les monastères* (Paris, 1953), xii.
95. T. F. Mathews, *The Early Churches of Constantinople: Architecture and Liturgy* (London, 1971), 11–18.
96. Eusebius, *Life of Constantine*, 4, 58.
97. The architecture is best discussed by S. Ćurčić, *Architecture in the Balkans: From Diocletian to Süleyman the Magnificent* (New Haven, 2010), 21–2 and 68–71; also see S. Ćurčić, 'Christianisation of Thessalonike: the making of Christian "Urban Iconography"', in eds. L. Nasrallah, C. Bakirtzis and S. J. Friesen, *From Roman to Early Christian Thessalonike* (Cambridge, Mass., 2010), 213–44; W. E. Kleinbauer, 'The original name and function of Hagios Georgios at Thessaloniki', *CahArch* 22 (1972), 55–60, and A. Mentzos, 'Reflections on the architectural history of the Tetrarchic Palace Complex at Thessalonike', in *ibid.* 333–60.
98. Writing in the seventeenth century, Evliya Celebi suggested the remote possibility that there were mosaics on the outside of the building as well as inside. The mosaics were first published in H. Torp, *Mosaikkene i St. Georgrotunden i Thessaloniki: et hovedverk i tidlig-bysantinsk kunst* (Oslo, 1963); more recently, H. Torp, 'La

technique des mosaïques de la Rotonde de Thessaloniki', *Arte medievale* 4 (2014), 267–80.

99. H. Torp, 'Dogmatic themes in the mosaics of the rotunda at Thessaloniki', *Arte medievale* 1 (2002), 11–34, says that technical details prove that the mosaics were a part of the integral work of conversion of the Galerian structure.

100. The most recent arguments are those of Torp, who favours a date of *c.* 400 or earlier; M. Vickers, 'The date of the mosaics of the Rotunda at Thessaloniki', *Papers of the British School at Rome* 38 (1970), 183–7, makes a case for a late fifth-century date. C. Bakirtzis, E. Kourkoutidou-Nikolaidoli and C. Mavropoulou-Tsioumi, *Mosaics of Thessaloniki: 4th to 14th Century* (Athens, 2012), 115–16, argue that the mosaics are early to mid-fourth century; W. E. Kleinbauer, 'The iconography and date of the mosaics of the Rotunda of Agios. Georgios, Thessaloniki', *Viator* 3 (1972), 27–108, argues for mid to later fifth century. B. Fourlas, *Die Mosaiken der Acheiropoietos-Basilika in Thessaloniki: eine vergleichende Analyse dekorativer Mosaiken des 5. und 6. Jahrhunderts*, 2 vols. (Berlin, 2012), makes the case for a date of 428 to *c.* 500. The evidence is inconclusive.

101. Above all by Torp in 'Dogmatic themes in the mosaics of the rotunda at Thessaloniki'.

102. For it as Constantine's mausoleum, see ed. Bakitzis, *Mosaics of Thessaloniki*, 115.

103. Torp believes that it was one campaign; Beat Brenk that it was the result of several separate campaigns. The figures for the scale of the mosaics are vague and imprecise. The frequently cited figure of 36 million tesserae in the dome is taken from C. Texier and R. Popplewell Pullan, *Byzantine Architecture; Illustrated by Examples of Edifices Erected in the East during the Earliest Ages of Christianity, with Historical and Archaeological Descriptions* (London, 1864), 137: it is an estimate whose basis is unclear. A. Antonaras, 'Glassware in Late Antique Thessalonike', in eds. Nasrallah et al., *Thessalonike*, 325, offers some more reliable figures.

104. R. F. Hoddinott, *Early Byzantine Churches in Macedonia and Southern Serbia: A Study of the Origins and the Initial Development of East Christian Art* (London, 1963), 112, gives details of the saints. Also see the excellent description of L. Nasrallah, 'Empire and apocalypse in Thessaloniki: interpreting the Early Christian Rotunda', *Journal of Early Christian Studies* 13 (2005), 465–508. On the iconography, see the readings of H. Torp, 'Les mosaïques de la Rotonde de Thessalonique: l'arrière-fond conceptual des images d'architecture', *CahArch* 50 (2002), 3–20; H. Torp, 'Un décor du vôute controversé: l'ornamentation "Sassanid" d'une mosaïque de la Rotonde de St-Georges, Thessaloniki', *ActaNorv* 15 (2001), 295–317; H. Torp, 'An interpretation of the Early Byzantine martyrs inscriptions of the mosaics of the Rotunda at Thessaloniki', *ActaNorv* 24 (2011), 11–44; W. E. Kleinbauer, 'The orants in the mosaic decoration of the Rotunda at Thessaloniki: martyrs, saints or donors?', *CahArch* 30 (1982), 25–46.

105. A. Grabar, 'À propos des mosaïques de la coupole de Saint-George a Salonique', *CahArch* 17 (1967), 59–82.

106. Nasrallah, 'Empire and apocalypse', points out that the Rotunda is a building where Christians appropriated space built by an emperor who persecuted Christians in order to articulate a Christian Roman identity supporting the empire.

107. M. G. Soteriou, 'Problēmata tēs eikonographias tou troullou to naou Ag. Georgiou Thessalonikis', *Deltion tes Christianikes Archaiologikes Hetaireias* 28/4 (1970–72), 191–204. Compare, for example, the blue and silver barrel west vault of the Rotunda with the floor mosaic from Daphni now in Dumbarton Oaks: Richter, *Catalogue of Greek and Roman Antiquities*, cat. 43 on p. 62 and pl. XXIVC.

108. Ling, *Roman Painting*, 193, 194.

109. Hoddinott, *Early Byzantine Churches*, 379–95.

110. I. G. Iliadis, 'The natural lighting of the mosaics in the Rotunda at Thessaloniki', *Lighting Research Technology* 33 (2001), 13–24.

111. Martyrium: *Archaiologikē Ephēmeris* 120 (1981), 53, particularly in Rome, 69: 'A number of mosaic pieces in light blue, orange, terracotta (with tesserae made by pieces of thin vases of terra sigillata), white (made by sea oysters) as well as 2 gold tesserae were found. The pieces of mosaic tesserae that were found during the excavations of the martyrium presuppose the decoration of its walls with multicoloured mosaics.' From Nea Kallikratia came excellently preserved glass tesserae, in various colours (blue, red, green, gold): 'Archaeology in Greece 2001–02', *Archaeological Reports* (supplement to the *Journal of Hellenic Studies*) 48 (2002), 76. For Amphipolis: *Praktika tēs en Athēnais Archaiologikēs Hetaireias* (1964), 35; (1972), 50 (incl. photo).

112. Antonaras, 'Glassware in Late Antique Thessalonike'.

113. As J. Elsner, *Imperial Rome and Christian Triumph* (Oxford, 1998), makes clear.

114. Mathews, *The Clash of Gods*, ch. 6.

115. Put well by Mathews, *ibid.* 95.

116. J.-M. Spieser, 'The representation of Christ in the apses of early Christian churches', *Gesta* 37 (1998), 63–73.

117. Brenk, *The Apse*. In the Library of the Asklepion in Pergamon, a statue of Hadrian appears to have been located in front of a mosaicked apse, but what the design of the mosaic was is unknown.

118. *Ibid.*; B. Brenk, 'Early Christian mosaics: a floating world of abstract association', *Hortus artium medievalium* 20.2 (2014), 647–57. B. Brenk, 'Zur Apsis als Bildort', in eds. A. Cutler and A. Papaconstantinou, *The Material and the Ideal* (Leiden, 2007), 15–30.

119. This is told by the fifth/sixth-century author Zacharias Rhetor, *Ecclesiastical History* 12, 4. The translation is from C. Mango, *Art of the Byzantine Empire 312–1453: Sources and Documents* (Toronto, 1974), 114–15.

120. Mathews, *The Clash of Gods*, ch. 5. For debates on this topic, see additionally Brenk, *The Apse*; B. Brenk, 'Apses, icons and "image propaganda" before Iconoclasm', *Antiquité tardive* 19 (2011), 109–30; Spieser,

'Representation of Christ'. For details of Early Christian apses, see C. Belting-Ihm, *Die Programme der christlichen Apsismalerei: vom 4. Jahrhundert bis zur Mitte des 8. Jahrhunderts* (2nd edition, Stuttgart, 1992).

121. As Toynbee and Ward-Perkins, *The Shrine of St Peter*, 71, pointed out. Also see F. Sear, 'Wall and vault mosaics', in eds. D. Strong and D. Brown, *Roman Crafts* (London, 1976), 236.

122. B. Ward-Perkins, 'A most unusual empire: Rome in the fourth century', in eds. C. Rapp and H. A. Drake, *The City in the Classical and Post-classical World* (Cambridge, 2014), 109–29.

6 TYPES OR PROTOTYPES?

1. For Albenga: M. Marcenaro, *Il battistero paleocristiana di Albenga* (Genoa, 1993); M. Marcenaro, 'Il mosaico del battistero di Albenga. Interpretazione iconogafica, iconologica e restauro', in eds. F. Guidobaldi and A. Guidobaldi, *AISCOM* 3 (Bordighera, 1996), 39–62; and M. Marcenaro *Il battistero monumentale di Albenga* (Albenga, 2006). This last makes the comparison to Milan at 64–5. Whether there were other mosaics in the baptistery is unknown. N. Christie, *From Constantine to Charlemagne: An Archaeology of Italy AD 300–800* (Aldershot, 2006), 134–5, for Albenga. Christie's book and C. Wickham, 'Early medieval archaeology in Italy: the last twenty years', *Archeologia medievale* 26 (1999), 7–20, help underpin the discussion of this chapter.
2. Marcenaro, *Il battistero paleocristiana*, 130: parts are missing, including possibly two names.
3. B. Massabò, *Albingaunum: itinerari archeologici di Albenga* (Genoa, 2004), 78.
4. The rather obscure reference to an inscription in the church of S. Thecla in Milan is quoted in R. Milburn, *Early Christian Art and Architecture* (Berkeley, 1988), 206.
5. Christie, *From Constantine to Charlemagne*, 133. Not all have mosaics but those that do include baptisteries in Mantua, S. Giusto, Novara, Canosa and Nocera Superiore. For full descriptions, see O. Brandt, *Battisteri oltre la pianta: gli alzati di nova battisteri paleocristiani in Italia* (Vatican City, 2012).
6. S. Siena Lusardi, 'Decorazione musiva da S. Giovanni alle Fonti', in ed. M. Rizzi, *La città e la sua memoria: Milano e la tradizione di Sant'Ambrogio* (Milan, 1997), cat. entry 3; images at 132.
7. See the discussion in R. Balzaretti, *Dark Age Liguria* (London, 2013), 45–7 and 65–7.
8. On community, see C. Wickham, *The Inheritance of Rome: A History of Europe from 400 to 1000* (London, 2010), 42.
9. *Ibid.* 58.
10. The surviving fragmentary patches of mosaic are confusing and likely to be of several dates. C. Ebanista, 'L'edicola mosaicata nella Basilica di S. Felice a Cimitile: nuovi dati e vicende conservative', in eds. F. Guidobaldi and A. Paribeni, *AISCOM* 6 (Ravenna, 2000), 411–24; C. Ebanista,'I mosaici parietali nell'edicola della basilica de S. Felice a Cimitile: tratti inediti e contesto', in *ibid.* 409–34; D. Korol, 'Le celebri pitture del Vecchio e Nuovo Testamento eseguite nella seconda metà del III ed all'inizio del V secolo a Cimitile/Nola', in M. de Matteis and A. Trinchese, *Cimitile di Nola/Cimitile bei Nola: inizi dell'arte cristiana e tradizioni locali/Anfänge der christlichen Kunst und lokale Überlieferungen* (Oberhausen, 2004), 147–53, 165–9, who sees it as late fifth to early sixth century and so not contemporary with the building of the aedicula.
11. U. M. Fasola, *Le catacombe di S. Gennaro a Capodimonte* (Rome, 1975); F. Bisconti, 'Mosaici nel cimitero di S. Gaudioso: revision iconografica ed approfondimenti iconologici', in ed. A. Paribeni, *AISCOM* 7 (Ravenna, 2001), 87–97.
12. For S. Giusto: C. Fiori, M. Vandini and M. Macchiarola, 'Le analisi archeometriche di un campione di tessere musive vitree', in ed. G. Volpe, *S. Giusto: la villa, le ecclesiae* (Bari, 1998), 177–83; C. Fiori, M. Vandini, M. Macchiarola and G. Ercolani, 'Characterization of mosaic "glazes" from the S. Giusto Basilica (Puglia, Italy)', *Key Engineering Materials* 132–6.2 (1997), 1444–7. Casaranello is near to Lecce. The small church has the form of a sort of Latin cross and is dated to either the fifth or the sixth century. The mosaic is in the cupola and arms of the cross. The eastern arm looks like floor mosaic; the vault is a cross set against night sky, the same theme as at S. Giovanni in Fonte and Galla's 'Mausoleum': A. Haseloff, 'I mosaici di Casaranello', *Bolletino d'arte del Ministero della pubblica istruzione* 1.12 (1907), 22–7; G. Bovini, 'I mosaici di S. Maria della Croce di Casaranello', *Corso di cultura sull'arte ravennate e bizantina* 2 (1964), 25–35; M. Falla Castelfranchi, 'La Chiesa di Sta Maria della Croce a Casaranello', in ed. G. Bertelli, *Puglia preromanica dal V secolo agli inizi dell' XI* (Bari, 2004), 161–75.
13. G. Bovini, 'I mosaici di S.Vittore "in Ciel d'oro" di Milano', *Corso di cultura sull'arte ravennate e bizantina* 16 (1969), 71–80. There is considerable disagreement as to whether the mosaics (heavily restored) belong to the early or late fifth century, either before the court left Milan for Ravenna in *c.* 400 or later, when there appears to have been a considerable cult of its bishops in Milan, as the city sought to assert itself against Ravenna and its bishops. See G. Mackie, 'Symbolism and purpose in an Early Christian martyr chapel: the case of San Vittore in Ciel d'Oro, Milan', *Gesta* 34 (1995), 91–101, for an earlier date, between the death of Ambrose and the departure of the court to Ravenna in 402; S. Collins. 'From martyrs' cults to confessors' cults in Late Antique Milan: the mosaics of San Vittore in Ciel d'Oro', *Journal of Late Antiquity* 5 (2012), 225–49, argues that late fifth-century Milan provides evidence for an increasingly elaborate cult

devoted to the city's bishops. Most recently: E. Neri, Tessellata vitrea *tardoantichi e altromedievali: produzione dei materiali e loro messa considerazioni generali e studio dei casi milanesi* (Turnhout, 2016).

14. E. Neri, M. Verità and A. Conventi, 'Glass mosaic tesserae from the fifth to sixth century baptistery of San Giovanni alle Fonti, Milan, Italy', in eds. C. Entwistle and L. James, *New Light on Old Glass: Recent Research on Byzantine Mosaics and Glass* (London, 2013), 1–10.

15. There is a great deal of debate over the importance of the pope in this period: ed. G. D. Dunn, *The Bishop of Rome in Late Antiquity* (Aldershot, 2015); J. Moorhead, *The Popes and the Church of Rome in Late Antiquity* (New York, 2015); M. Humphries, 'From emperor to pope? Ceremonial, space and authority at Rome from Constantine to Gregory the Great', in eds. K. Cooper and J. Hillner, *Religion, Dynasty and Patronage in Early Christian Rome, 300–900* (Cambridge, 2007), 21–58; K. Sessa, *The Formation of Papal Authority in Late Antique Italy: Roman Bishops and the Domestic Sphere* (Cambridge, 2012).

16. See W. Pohl, '410 and the transformation of the Roman world', in eds. J. Lipps, C. Machado and P. von Rummel, *The Sack of Rome in 410 AD: The Event, its Context and its Impact* (Wiesbaden, 2013), 449–55, esp. 450; and in contrast, P. Heather, '410 and the end of civilisation', in *ibid*. 433–48. On the military pressures of the barbarian migrations, see Heather, '410' (summarising to an extent Heather's views – essentially mass migrations of people; the military pressures they exerted disrupted the functioning of government and the fall of the empire had severe consequences for politics, economics and society), as against M. Kulikowski, 'The failure of Roman arms', in *ibid*. 77–83 (small groups of migrants; the sack of Rome was a result of a tangle of factors and the fall of the Empire was the result of political failures in the Roman system).

17. See eds. Lipps et al., *The Sack of Rome*.

18. See the discussion in N. Christie, *The Fall of the Western Roman Empire: An Archaeological and Historical Perspective* (London, 2011), ch. 5, 149, for the figures of a half to a quarter of a million. D. Whitehouse, 'Rome and Naples: survival and revival in central and southern Italy', in eds. R. Hodges and B. Hobley, *The Rebirth of Towns in the West, AD 700–1050* (London, 1988), 28–3, for a sharper decline.

19. *Vita Melania Iunioris*: ed. and tr. E. A. Clark, *The Life of Melania, the Younger: Introduction, Translation, and Commentary* (New York, 1984), ch. 15.

20. F. W. Schlatter, 'The text in the mosaic of Sta Pudenziana', *Vigiliae Christianae* 43 (1989), 155–65, argues that the church survived the Sack of Rome.

21. For paganism, M. R. Salzman, 'Memory and meaning. Pagans and 410', in ed. Lipps et al., *The Sack of Rome*, 295–310, arguing that paganism was a force, in contrast to the views of A. Cameron, *The Last Pagans of Rome* (Oxford, 2011), making a case that paganism was defunct as a religious and intellectual system by 400.

22. *LP* 432–40; F. M. D. Darsy, *Santa Sabina* (Rome, 1961); H. Brandenburg, *Ancient Churches of Rome from the Fourth to the Seventh Century* (Turnhout, 2005), 167–76. The church is effectively contemporary with S. Maria Maggiore. E. Thunø, 'Looking at letters. "Living writing" in S. Sabina in Rome', *Marburger Jahrbuch für Kunstwissenschaft* 34 (2007), 19–41. The inscription is about 105 × 2.75 m and the letters are about 28–32 cm high. Presbyter was an office which had been indistinguishable from bishop and was only now becoming disentangled from it.

23. E. Borsook, 'Rhetoric or reality: mosaics as expressions of a metaphysical idea', *Mitteilungen des Kunsthistorischen Institutes in Florenz* 44 (2000), 3–18. E. Thunø, *The Apse Mosaic in Early Medieval Rome: Time, Network and Repetition* (Cambridge, 2015), an important study looking at the ways in which mosaic images and their inscriptions inform each other.

24. Brandenburg, *Ancient Churches*, 167–76; and 174 suggests that traces of mosaic survived in the nave in the seventeenth century, under the windows of the clerestory.

25. For S. Maria Maggiore see Andaloro/Romano A1, 269–94; Andaloro/Romano C1, 305–46; B. Brenk, *Die frühchristlichen Mosaiken in S. Maria Maggiore zu Rom* (Wiesbaden, 1975); Brandenburg, *Ancient Churches*, 176–89. Suzanne Spain, '"The promised blessing": the iconography of the mosaics of S. Maria Maggiore', *Art Bulletin* 61 (1979), 518–40, wants to see the wall and arch mosaics as all of a piece and the same campaign, arguing that all bear Old Testament resonances and that the scenes of the nave reflect faith rewarded. She also claims that it is too soon to see the triumphal arch in the context of the Council of Ephesos. In S. Spain, 'Carolingian restorations of the mosaics of Sta Maria Maggiore in Rome', *Gesta* 16 (1977), 13–22, she detected considerable Carolingian restoration in mosaics of S. Maria Maggiore. P. J. Nordhagen, 'The archaeology of wall mosaics: a note on the mosaics in Sta. Maria Maggiore in Rome', *Art Bulletin* 65 (1983), 323–4, vehemently disagreed. Also B. Brenk, 'La tecnica dei mosaici paleocristiani di S. Maria Maggiore a Roma', in eds. E. Borsook, F. Gioffredi Superbi and G. Pagliarulo, *Medieval Mosaics: Light, Color, Materials* (Milan, 2000), 139–48.

26. See C. Belting-Ihm, *Die Programme der christlichen Apsismalerei: vom 4. Jahrhundert bis zur Mitte des 8. Jahrhunderts* (2nd edition, Stuttgart, 1992), 177–9 and 56, fig. 10.

27. I say north and south, but S. Maria Maggiore is not orientated east–west. The apse faces north-west.

28. M.-L. Therel, 'Une image de la sibylle sur l'arc triomphal de Ste-Marie-Majeure à Rome', *CahArch* 12 (1961), 153–72. For associations with Ephesos see Brenk, *Die frühchristlichen Mosaiken*, who also sees links to the sermons of Leo I and the theology of Ambrose.

29. In the house-church at Dura Europos, for example: C. H. Kraeling, *The Christian Building: The Excavations at Dura-Europos Final Report 8, part 2* (New Haven, 1967).

30. Brandenburg, *Ancient Churches*, 185 and n.22.

31. R. Warland, 'The concept of Rome in Late Antiquity reflected in the mosaics of the triumphal arch of S. Maria Maggiore in Rome', *ActaNorv* 17 (2003), 127–41.
32. Andaloro/Romano A1, 203–12; Andaloro/Romano C1, 348–58; Brandenburg, *Ancient Churches*, 43. It is not known whether there were Constantinian mosaics in the building, though textual sources from the sixteenth century record that the ambulatory was decorated with mosaic.
33. Andaloro/Romano A1, 203–12; Andaloro/Romano C1, 416–18; Liverani, 'St Peter's, Leo the Great'.
34. Andaloro/Romano C1, 425–38; *LP* 48, Hilarius. Hilarius was also responsible for chapels in the baptistery dedicated to S. Croce and John the Baptist where later sources record mosaics but these no longer survive. The *LP* does not mention mosaics in them. G. Mackie, 'The Sta Croce drawings: a re-examination', *RACAR* 24 (1997), 1–14; also G. Mackie, *Early Christian Chapels in the West: Decoration, Function, and Patronage* (Toronto, 2003), 195–211.
35. A now-lost inscription recorded that the church had once been decorated with paintings by Pope Damasus (366–84) which were replaced with *pulchra metalla* (probably mosaic) by Hilarius: see Brandenburg, *Ancient Churches*, 134.
36. *LP* 49, Simplicius. It was built as a church despite speculation that it was a converted pagan building. H. Brandenberg, 'Sto Stefano Rotundo in Rome: funzione urbanistica, tipologia architettonica, liturgia ed allestimento liturgico', *Mededelingen van het Nederlands Historisch Instituut te Rome* 59 (2000), 27–54; Brandenburg, *Ancient Churches*, 200–13.
37. R. Krautheimer, 'Santo Stefano Rotondo a Roma e la Chiesa del Santo Sepolcro a Gerusalemme', *Rivista di archeologia cristiana* 12 (1935), 51–102, and tr. as 'St Stefano in Rome and the Rotunda of the Holy Sepulchre in Jerusalem', in R. Krautheimer, *Studies in Early Christian, Medieval and Renaissance Art* (New York, 1969), 69–106.
38. Brandenburg, *Ancient Churches*, 215.
39. In fact, the *Liber Pontificalis* only records explicitly one mosaic – mosaic lambs adorning a fountain at St Peter's: *LP*, Symmachus.
40. A. Gillett, 'Rome, Ravenna and the last western emperors', *Papers of the British School at Rome* 49 (2001), 131–67; M. Humphries, 'Valentinian III and the city of Rome (425–55)', in eds. L. Grig and G. Kelly, *Two Romes: Rome and Constantinople in Late Antiquity* (Oxford, 2012), 161–82.
41. Andaloro/Romano A1, 117–24; Andaloro/Romano C1, 366–410. The painting was the work of Giovanni Paolo Panini, reproduced as fig. 83 in H. L. Kessler, 'Bright gardens of paradise', in ed. J. Spier, *Picturing the Bible: The Earliest Christian Art* (New Haven, 2007), 115. The mosaic now in the apse is a thirteenth-century creation of Pope Honorius III, and it is not known what it replaced, though that too may have been the work of Galla. Also M. Docci, *San Paolo fuori le mura: dalle origini alla basilica delle origini* (Rome, 2008).
42. L. Hodne, 'The "double apostolate" as an image of the church. A study of early medieval apse mosaics in Rome', *ActaNorv* 6 (2006), 141–62. As we shall see, Peter and Paul were regularly featured together in Roman mosaics, often with Paul on the viewer's left – the right-hand side, the more important side, of the central figure of the image
43. Brandenburg, *Ancient Churches*, 106.
44. See L. Brubaker, 'Memories of Helena: patterns in imperial female matronage in the fourth and fifth centuries', in ed. L. James, *Women, Men and Eunuchs: Gender in Byzantium* (London, 1997), 52–75.
45. S. Agata: Andaloro/Romano A1, 165–6; C. Huelsen, *S. Agata dei Goti* (Rome, 1924); Brandenburg, *Ancient Churches*, 462–72. In the sixteenth century, this mosaic appears to have had a blue or white background. S. Andrea: Brandenburg, *Ancient Churches*, 218–19; G. Kalas, 'Architecture and élite identity in late antique Rome: appropriating the past at Sant'Andrea Catabarbara', *Papers of the British School at Rome* 81 (2013), 279–302; M. Sapelli, 'La basilica di Giunio Basso', in S. Ensoli and E. La Rocca, *Aurea Roma: dalla città pagana alla città cristiana* (Rome, 2000), 137–8. In 1630, the mosaic in S. Andrea had a gold background.
46. R. Giuliani, 'Un arcosolio mosaico nelle catacombe de S. Ermete sulla Via *Salaria Vetus*', in ed. A. Paribeni, *AISCOM* 7 (Ravenna, 2001), 153–66.
47. Gillett, 'Rome, Ravenna'.
48. D. M. Deliyannis, *Ravenna in Late Antiquity* (Cambridge, 2010), 49. Also on the Ravenna mosaics, M. Verhoeven, *The Early Christian Monuments of Ravenna: Transformation and Memory* (Turnhout, 2011).
49. Agnellus of Ravenna, *Agnelli Ravennatis Liber pontificalis ecclesiae Ravennatis*, ed. D. M. Deliyannis (Turnhout, 2006), ch. 35; *The Book of Pontiffs of the Church of Ravenna*, tr. D. M. Delyannis (Washington, DC, 2004), 137. Deliyannis, *Ravenna*, 61–2.
50. Deliyannis, *Ravenna*, 103; S. Pasi, 'La decorazione musiva degli intradossi delle finestre absidali della basilica di S. Agata Maggiore di Ravenna', *Proceedings of the Third International Colloquium on Ancient Mosaics, Ravenna 1980* (Ravenna, 1984), 65–72. For the Ursiana, see Deliyannis, *Ravenna*, 85–8. At about 60 × 35 m, it was smaller than the Lateran or Ambrose's cathedral in Milan but about the same size as the cathedral of Aquileia dating to *c.* 400. Agnellus tells us about its mosaics, which are presumed to have been part of the original church.
51. This is the reconstruction proposed by Deliyannis, *Ravenna*, 63–9.
52. W. E. Kleinbauer, 'Orants as donors', in eds. O. Feld and U. Peschlow, *Studien zur spätantiken und byzantinischen Kunst Friedrich Wilhelm Deichmann gewidmet* (Bonn, 1986), vol. 3, 89–94, suggests that the use of imperial figures in this way in the apse may have come from Constantinople. There is no evidence or any reason to assume that they did. Rather, Rome seems a more likely influence, if one was needed,

especially is it is likely that Constantine was pictured in St Peter's.

53. It may have had a mosaic depicting an apocalyptic vision of Christ, the lion and the basilisk, and surrounded by the four rivers of paradise, with the four Beasts of the Apocalypse and the twenty-four Elders. The dedication of the church to S. Croce would have been immediately evocative of the saintly Empress Helena, mother of Constantine the Great. In Rome, Galla had added mosaics to Helena's S. Croce.

54. Deliyannis, *Ravenna*, 74–84; also see M. J. Johnson, *The Roman Imperial Mausoleum in Late Antiquity* (Cambridge, 2009), 172, for where Galla was probably buried. G. Mackie, 'The mausoleum of Galla Placidia: a possible occupant', *Byzantion* 65 (1995), 396–404, suggests it was built by Galla for her son by Athaulf, Theodosius, who died in 415. If so, she hauled his body about with her an awful lot. Also see Mackie, *Early Christian Chapels*.

55. On the iconography see, from many, E. Swift and A. Alwis, 'The role of Late Antique art in early Christian worship: a reconsideration of the iconography of the "starry sky" in the "Mausoleum" of Galla Placidia', *Papers of the British School at Rome* 78 (2010), 193–217; P. Courcelle, 'Le gril de Saint Laurent au Mausolée de Galla Placidia', *CahArch* 3 (1948), 29–39; G. Mackie, 'New light on the so-called Saint Lawrence Panel at the Mausoleum of Galla Placidia, Ravenna', *Gesta* 29 (1990), 54–60. W. Seston, 'Le jugement dernier au mausolée de Galla Placidia à Ravenna', *CahArch* 1 (1946), 37–50, suggests Milanese influences (and why not?).

56. Bovini, 'I mosaici di S. Maria della Croce'; Falla Castelfranchi, 'La Chiesa di Sta Maria della Croce'. The mosaic is also discussed by Swift and Alwis, 'The role of Late Antique art'.

57. A. J. Wharton, 'Ritual and reconstructed meaning: the Neonian Baptistery in Ravenna', *Art Bulletin* 69 (1987), 358–75.

58. Deliyannis, *Ravenna*, 188–96. John was the patron of St Laurence and mosaics in the Church of SS. Gervase and Protasus; Peter was the founder of the monasterium of St Andrew and its mosaic of that saint.

59. Deliyannis, *Ravenna*, 61. Reused tesserae: M. Verità, 'Glass mosaic tesserae of the Neonian Baptistery in Ravenna: nature, origin, weathering causes and processes', *Proceedings of the Conference: Ravenna Musiva, 22–24 October 2009* (Ravenna, 2010), 89–103.

60. Benaki Museum Inv. No. 9074. This mosaic is discussed in Chapter 9. Suggesting that this fragment may be fifth century is controversial as it is usually dated to the late tenth/early eleventh century, through comparison with the panel in the south-west vestibule of Hagia Sophia (Istanbul) depicting Mary and Christ flanked by Constantine and Justinian and because of a late tenth-century account of the mosaics by John Geometres: ed. M. Vassilaki, *Mother of God: Representations of the Virgin in Byzantine Art* (Milan, 2000), cat. no. 40, 359. However, the orange tesserae around the nose and mouth are typical of earlier mosaics: see the comments of E. J. W. Hawkins, 'Further observations on the narthex mosaic in St. Sophia at Istanbul', *DOP* 22 (1968), 153–66. The mosaic has been reset, which does not help.

61. M. Jugie, 'L'église des Chalkoprateia et le culte de la ceinture de la Sainte Vierge à Constantinople', *Echos d'Orient* 16 (1913), 308–12. A translation of the text from Paris Ms. Gr. 1447, fols. 257–8 is provided by C. Mango, *Art of the Byzantine Empire 312–1453: Sources and Documents* (Toronto, 1974), 34–5.

62. Mango, *Art of the Byzantine Empire*, 34–5.

63. B. Ward-Perkins, 'Old and New Rome compared. The rise of Constantinople', in eds. Grig and Kelly, *Two Romes*, 53–78.

64. As J.-M. Spieser, 'The Christianisation of the city in Late Antiquity', English translation of 'La Christianisation de la ville dans l'antiquité tardive', Study III in J.-M. Spieser, *Urban and Religious Spaces in Late Antiquity and Early Byzantium* (Aldershot, 2001), points out, several major churches are being excavated in Thessaloniki so it is clear that we do not have the whole picture. He suggests that the Acheiropoietas dates to the late fifth century; that pre-fire St Demetrios dates to post-510, and that the Rotunda became a church at the same time; and that Hosios David is perhaps contemporary with S. Vitale.

65. The Acheiropoietas is 51.9 × 30.8 metres, so smaller than the great Roman basilica churches, but nevertheless a good size: see eds. C. Bakirtzis, E. Kourkoutidou-Nikolaidoli and C. Mavropoulou-Tsioumi, *Mosaics of Thessaloniki: 4th to 14th Century* (Athens, 2012), 196–237. Elsewhere in Thessaloniki, the remains of a huge fifth-century basilica church, possibly the largest in the region at 94 × 53 metres (a size putting it close to the big Constantinian basilicas in Rome – the Lateran at 100 × 55 metres for example, or S. Maria Maggiore) have been found under the present church of Hagia Sophia.

66. B. Fourlas, *Die Mosaiken der Acheiropoietos-Basilika in Thessaloniki: eine vergleichende Analyse dekorativer Mosaiken des 5. und 6. Jahrhunderts* (Berlin, 2012), puts early St Demetrios into the second third of the sixth century and believes the Acheiropoietas and Rotunda to be close in date. Also A. Taddei, 'Il mosaico parietale aniconico da Tessalonica a Costantinopoli', in eds. A. Acconcia Longo et al., *La sapienza bizantina: un secolo di ricerche sulla civiltà di Bisanzio all'Università di Roma* (Rome, 2012), 153–82.

67. Ed. Bakirtzis et al., *Mosaics of Thessaloniki*, 228, 235 for details.

68. *Ibid.* 237 for details. Bakitzis et al. prefer a date in the 450s; R. S. Cormack, 'The mosaic decoration of St. Demetrios, Thessaloniki. A re-examination in the light of the drawings of W. S. George', *Annual of the British School at Athens* 64 (1969), 51, suggests 491–7.

69. See E. Tsigaridas, *Latomou Monastery* (Thessaloniki, 1988); ed. Bakirtzis et al., *Mosaics of Thessaloniki*, 180–295. For a summary of the literature see L. James, 'Images of text in Byzantine art: the apse mosaic in Hosios David, Thessaloniki', in eds. K. Krause and B. Schellewald, *Bild und Text im Mittelalter* (Vienna, 2011), 255–66.

70. C. Diehl, 'À propos de la mosaïque d'Hosios David à Salonique', *Byzantion* 7 (1932), 33–8, argued for a fifth-century date against C. R. Morey, 'A note of the date of the mosaics of Hosios David, Salonica', *Byzantion* 7 (1932), 339–46, who suggested a seventh-century date and Alexandrian mosaicists. F. Gerke, 'Il mosaico absidale di Hosios David di Salonicco', *Corso di cultura sull'arte ravennate e bizantina* 11 (1964), 179–99, gave a detailed stylistic case for a fifth-century date. J.-M. Spieser, *Thessalonique et ses monuments du IVe au VI siècle* (Paris, 1984), 157, prefers the mid-sixth century.
71. Belting-Ihm, *Die Programme*, 42–51 and 182–4; A.-O. Poilpré, *Maiestas Domini: une image de l'église en Occident V–XIe siècle* (Paris, 2005).
72. T. F. Mathews, *The Clash of Gods: A Reinterpretation of Early Christian Art* (Princeton, 1993, reprint 1999), ch. 5, sees him as a feminine Christ rather than an imperial Christ. J.-M. Spieser, 'Remarques complémentaires sur la mosaïque de Osios David', in Διεθνής Συμπόσιο Βυζαντινή Μακεδονία (Thessaloniki, 1995), 295–306, sees him as Christ the Lord.
73. The text within this book reads: 'A living source, capable of receiving and nourishing the souls of the faithful [is] this all-honoured house': text in D. Feissel, *Recueil des inscriptions chrétiennes de Macédoine du IIIe au Vie siècle* (Paris, 1983), 99.
74. There has been a great deal of discussion as to who they might be: suggestions include Ezekiel and Isaiah, Ezekiel and Zachariah, Ezekiel and John the Evangelist, Isaiah and John the Evangelist, Peter and Paul, and Ezekiel and Habakkuk. This last is the most widely accepted interpretation, because this is how a (probably) twelfth-century account written by an Abbot Ignatios identified the two figures (text translated in Mango, *Art of the Byzantine Empire*, 155–6). See W. A. Meeks and M. F. Meeks, 'Vision of God and scripture interpretation in a fifth-century mosaic', in eds. C. A. Bobertz and D. Brakke, *Reading in Christian Communities: Essays on Interpretation in the Early Church* (Notre Dame, IN, 2002), 131–2.
75. Text in Feissel, *Receuil*, 98.
76. Ed. Bakirtzis et al., *Mosaics of Thessaloniki*, 128–79; R. Cormack, 'The mosaic decoration of S. Demetrios, Thessaloniki: a re-examination in the light of the drawings of W.S. George', *Annual of the British School of Athens* 64 (1969), 17–52. Also see Cormack's Additional Notes and Comments at the end of the collection of his papers published as *The Byzantine Eye* (London, 1989).
77. Cormack, 'Mosaic decoration', makes the case for these being fifth century.
78. At Apameia (Huarte), the vault of the apse was mosaicked with gold: P. Canivet, 'Peintures murals et mosaïques d'abside en verre a Huarte IV–V s.', in ed. L. Hadermann-Misguich, *Rayonnement grec: hommages à Charles Delvoye* (Brussells, 1982), 313–24, and C. Lahanier, 'Études des tesselles de mosaïques et de verre à vitre syriens', in eds. M. T. Canivet and P. Canivet, *Huarte, sanctuaire chrétien d'Apamène: IVe–VIs.* (Paris, 1987), 331–46. Kourion: A. H. S. Megaw, 'Excavations at the episcopal basilica at Kourion 1974–1975. A preliminary report', *DOP* 30 (1976), 345–74, with brief description and the suggestion that some of the mosaics date to the fifth century and others which include mother-of-pearl to the seventh. Knossos: R. Sweetman, 'Late Antique Knossos. Understanding the city: evidence of mosaics and religious architecture', *Annual of the British School at Athens* 99 (2004), 315–54: wall mosaics in the Knossos Medical Faculty basilica and possibly in the Sanatorium church. Only these two in a survey of some ninety churches on Crete built from the fifth to sixth century provide any evidence of wall mosaics. At Gortyna (fifth or sixth century), one of the most important cities of Byzantine Crete, about 290 kg of tesserae were found, in various colours: black, blue, yellow, red, white, greens, turquoise. They may have been destined for the vast cathedral basilica of St Titus: A. di Vita, 'Atti della Scuola 1998–2000', in *Annuario della Scuola archeologica di Atene e delle Missioni italiane in oriente* 60/62 (1998–2000), 409. At Corinth, glass tesserae and uncut lumps of coloured glass suggested wall mosaic in the apse and on the triumphal arch: J. M. Shelley, 'The Christian basilica near the Cenchrean Gate at Corinth', *Hesperia* 12.2 (1943), 166–89, at 171.
79. J. B. Ward-Perkins, 'The shrine of St Menas in the Maryût', *Papers of the British School at Rome* 17 (1949), 26–71; the fragments are preserved in the Greek and Roman Museum in Alexandria. Ward-Perkins sees the mosaic as contemporary with the building, and probably located over the vault and walls. Fallen gold tesserae in the ruins of the church were recorded at the junction of nave and transept, and the octagonal baptistery also had gold mosaic in the dome. The *Acts of St Menas* record the mosaics of the church 'glowing like gold'.
80. C. Mango, 'The pilgrimage centre of St. Michael at Germia', *Jahrbuch der Österreichischen Byzantinistik* 36 (1986), 117–32: at about 50 × 27 metres, it is one of the biggest churches known in the interior of Asia Minor.
81. G. Avni, *The Byzantine–Islamic Transition in Palestine: An Archaeological Approach* (Oxford, 2014), suggests that Qal'at Sem'an was established in the fifth century and occupied continuously between the seventh and tenth centuries, until it was severely damaged by an earthquake in the eleventh.
82. Z. Skhirtladze, 'The apse decoration of the Akhiza cathedral: documents and materials in the museums of Georgia', *Anatolian Studies* 59 (2009), 139–140. The mosaic was destroyed in the twentieth century; some fragments survive in museums. Its date is unclear as it is not certain whether it is contemporary with the rebuilding of the fortress and presumed building of the cathedral.
83. Sidonius Apollinaris, *Letter to Hesperius*, II, 10, in text and tr. A. Loyen, *Sidoine Apollinaire* (Paris, 1970), vol. 2, *Lettres*.
84. Some tesserae may still be in Toulouse Museum. H. Woodruff, 'The iconography and date of the mosaics of La Daurade', *Art Bulletin* 13 (1931), 80–104; O. Lamotte, 'Description des mosaïques de la Daurade à Toulouse',

CahArch 13 (1962), 261–6; G. Mackie, 'La Daurade: a royal mausoleum', *CahArch* 42 (1994), 17–34. For the history behind the Goths, see C. Delaplace, 'La stratégie des Goths après 410 et leur installation par l'empire romaine en Aquitaine (416–418)', in eds. Lipps et al., *The Sack of Rome*, 423–30. Part of a description of the mosaics written in 1633 when they were cleaned is translated in C. Davis-Weyer, *Early Medieval Art 300–1150* (Toronto, 1986), 59–66, who suggests a sixth-century date.

85. As Thunø, *The Apse Mosaic*, demonstrates, pulling out the commonalities in Roman mosaics of the sixth to ninth centuries.

7 EMPERORS, KINGS, POPES AND BISHOPS

1. Excavations between 1931 and 1932 undertaken jointly by the Staatliche Museen, Berlin and the Metropolitan Museum, New York, uncovered fragments of mosaic: www.metmuseum.org/collection/the-collection-online/search/322789?rpp=30&pg=1&ft=mosaic+fragments&pos=1.
2. I. Shahîd, 'Byzantium in South Arabia', *DOP* 33 (1979), 23–94; G. R. D. King, 'Some Christian wall-mosaics in pre-Islamic Arabia', *Proceedings of the Seminar for Arabic Studies* 10 (1980), 37–43. At Sana'a, decoration appears to have been aniconic with floral motifs, crosses, stars and use of gold. King dates it to *c.* 527–late 560s.
3. Y. Christe, 'À propos du décor de l'arc absidal de Sta Restituta à Naples', in eds. O. Feld and U. Peschlow, *Studien zur spätantiken und byzantinischen Kunst Friedrich Wilhelm Deichmann gewidmet* (Bonn, 1986), vol. 2, 157–61. The ninth-century *Gesta* of the bishops of Naples records mosaic in the apse of the basilica – Christ and the twelve apostles – and claims it was installed in the fourth century. Sources also suggest that there was an eighth-century mosaic. Descriptions of the mosaics of the apsidal arch make it sound similar to Roman mosaics of the sixth and eighth centuries (SS. Cosmas and Damian and S. Prassede): Christ enthroned between seven angels and candlesticks; old people offering crowns to Christ; G. Mackie, *Early Christian Chapels in the West: Decoration, Function, and Patronage* (Toronto, 2003) and V. Lucherini, *La Cattedrale di Napoli* (Rome, 2009), with discussion of the sources. Also see C. Belting-Ihm, 'Theophanic images of divine majesty in early medieval Italian church decoration', in ed. W. Tronzo, *Italian Church Decoration of the Middle Ages and Early Renaissance* (Bologna, 1989), 43–59, who suggests that the Transfiguration commissioned by Bishop Johannes for the *Ecclesia Salvatoris* in Naples was a copy of the mosaic in St Catherine's, Mount Sinai. On the Naples cathedral more widely, see S. Romano, *Il Duomo di Napoli da paleocristiano all'età angìoina* (Naples, 2008). Chalon-sur-Saône: Gregory of Tours, *History of the Franks,* 5.45, calling it 'musivum'; ed. H. Omont and G. Collon, *Grégoire de Tours, Histoire des Francs: texte des manuscrits de Corbie et de Bruxelles* (originally Paris 1886–93; republished Paris, 1913).
4. 'Warm-coloured' is the term used in E. J. W. Hawkins, M. C. Mundell and C. Mango, 'The mosaics of the monastery of Mār Samuel, Mār Simeon, and Mār Gabriel near Kartmin with a note on the Greek inscription', *DOP* 27 (1973), 279–96. Also see G. Bell, *Churches and Monasteries of Ṭur 'Abdîn and Neighbouring Districts* (Heidelberg, 1913), commenting on 'fragments of mosaic'; J. Leroy, 'Le décor de l'église du Monastère de Qarṭāmīn d'après un texte syriaque', *CahArch* 8 (1956), 75–82; A. Grabar, 'Quelques observations sur le décor de l'église de Qartamin', *CahArch* 8 (1956), 83–91.
5. Glass tesserae in greens, blues and yellows could be found on the ground and in the spoil heaps throughout the site of the main church and baptistery alike when I visited the site in 2012.
6. B. Brenk. 'Fragmente von Wandmosaiken aus der sog. Kathedrale von Gerasa', in ed. O. F. Osti, *Mosaics of Friendship: Studies in Art and History for Eve Borsook* (Florence, 1999), 49–59.
7. M. M. Mango, 'Excavation and surveys at Androna', *DOP* 56 (2002), 307–15.
8. R. Bayliss, 'The Alacami in Kadirli: transformations of a sacred monument', *Anatolian Studies* 47 (1997), 57–87.
9. As Hawkins et al., 'Mosaics of Kartmin', do, suggesting that the mosaics were drawn from a standard repertoire but the figures were simply omitted, so not a decoration depersonalised through abstraction.
10. King, 'Some Christian wall-mosaics'. J. W. Crowfoot, *Early Churches in Palestine* (London, 1941), 111, claimed that 'It is certain that for some time at least glass mosaics were used almost as lavishly in Palestinian churches as frescoes in medieval Europe.' He also cites evidence of the use of wall mosaic in private homes in Antioch; and lists thirteen churches with evidence of wall mosaic, seven of which come from Gerasa. He suggests that the failure to find evidence on some of the more impressive churches (e.g. in Gerasa) is more than likely to be the result of spoliation.
11. Hawkins et al., 'Mosaics of Kartmin'.
12. *Ibid.*
13. Described by Procopius of Caesarea, *De aedificiis/On Buildings*, text and tr. H. B. Dewing (Cambridge, Mass., 1940); see G. Downey, 'Justinian as a builder', *Art Bulletin* 32 (1950), 262–6; J. Elsner, 'The rhetoric of building in the *De aedificiis* of Procopius', in ed. L. James, *Art and Text in Byzantine Culture* (Cambridge, 2007), 33–57.
14. P. N. Bell, *Three Political Voices from the Age of Justinian* (Liverpool, 2009).
15. Paul the Silentiary, *Description of Hagia Sophia*: ed. P. Friedländer, *Johannes von Gaza und Paulus Silentarius* (Leipzig and Berlin, 1912); Italian translation and

commentary by M. L. Fobelli, *Un tempio per Giustiniano: Santa Sofia di Constantinopoli e le 'Descrizione' di Paolo Silenziario* (Rome, 2005) and the *Narratio de Sta Sophia*, tr. Berger, *Patria*.

16. According to Paul the Silentiary, verses 506–8, the centre of the main dome was adorned with an enormous mosaic cross.
17. On the ornamental mosaics, see N. Schibille, *Hagia Sophia and the Byzantine Aesthetic Experience* (Farnham, 2014).
18. As discussed in Chapter 3, 'The Business of Mosaics'.
19. See E. S. Bolman, 'Late Antique aesthetics, chromophobia and the Red Monastery, Sohag, Egypt', *Eastern Christian Art* 3 (2006), 1–24; A. Gonosová, 'The formation and sources of Early Byzantine floral semis and floral diaper patterns re-examined', *DOP* 41 (1987), 227–37; E. Kitzinger, 'Stylistic developments in pavement mosaics in the Greek East from the age of Constantine to the age of Justinian', in *La mosaïque gréco-romaine: Actes du Colloque international à Paris, 29 August–3 September, 1963* (Paris, 1965), 341–50.
20. P. A. Underwood and E. J. W. Hawkins, 'The mosaics of Hagia Sophia at Istanbul: the portrait of the Emperor Alexander: a report on work done by the Byzantine Institute in 1959 and 1960', *DOP* 15 (1961), 187–217, observed that colours in the church were used very selectively and that mixed colours were consistently avoided.
21. Schibille, *Hagia Sophia*. These polychrome egg shapes have been identified as pine cones, lotus buds or palmettes by R. Cormack and E. J. W. Hawkins, 'The mosaics of St. Sophia at Istanbul: the rooms above the southwest vestibule and ramp', *DOP* 31 (1977), 175–251. Also see N. B. Teteriatnikov, *Mosaics of Hagia Sophia, Istanbul: The Fossati Restoration and the Work of the Byzantine Institute* (Washington, DC, 1998), 15.
22. Schibille, *Hagia Sophia*. The mosaics in the soffits of the nave arcades either date to the sixth century or follow sixth-century designs closely: Underwood and Hawkins, 'The mosaics of Hagia Sophia at Istanbul'. P. Niewöhner and N. Teteriatnikov, 'The south vestibule of Hagia Sophia at Istanbul. The ornamental mosaics and the private door of the patriarchate', *DOP* 68 (2015), 117–55, suggest that the ornament of the vestibule is in part sixth century.
23. Described in an epigram carved around the inside walls of the church: *Greek Anthology* 1, 10; tr. W. R. Paton (Cambridge, Mass., 1960). The excavator of St Polyeuktos, Martin Harrison, in *A Temple for Byzantium* (London, 1989), 78–80, felt that some remains from the east end of church suggested the presence of figurative mosaics. Also see N. Schibille and J. McKenzie, 'Glass tesserae from Hagios Polyeuktos, Constantinople: their early Byzantine affiliations', in eds. D. Keller, J. Price and C. Jackson, *Neighbours and Successors of Rome: Traditions of Glass Production and Use in Europe and the Middle East in the Later First Millennium AD* (Oxford, 2014), 114–27.
24. C. L. Striker and Y. Doğan Kuban, 'Work at Kalenderhane Camii in Istanbul: third and fourth preliminary reports', *DOP* 25 (1971), 251–8, at 256, and eds. C. Striker and Y. Doğan Kuban, *Kalenderhane in Istanbul: The Buildings, their History, Architecture, and Decoration: Final Reports on the Archaeological Exploration and Restoration at Kalenderhane Camii, 1966–1978* (Mainz, 1997), 121–4.
25. See Cormack and Hawkins, 'The rooms above the vestibule and ramp'.
26. Procopius, *Buildings*, I, 10, 12–20.
27. Procopius, *Buildings*, V, 8, 4–9.
28. The restoration work done by the Princeton Expedition and Ernest Hawkins showed that the mosaic had never been touched by restorers and was to all intents and purposes original: K. Weitzmann, 'The mosaic in St. Catherine's monastery on Mount Sinai', *Proceedings of the American Philosophical Society* 110 (1966), 392–405, rreprinted in Weitzmann, *Studies in the Arts at Sinai* (Princeton, 1982), 5–18, at 12. The most recent restoration work is that of Roberto Nardi: R. Nardi, 'Il restauro del mosaico della Trasfigurazione nel monastero di Sta Caterina nel Sinai', *Rendiconti della Pontificia Accademia Romana di Archeologia* 82 (2009–10), 3–17; R. Nardi and C. Zizola, *Monastero di Sta Caterina, Sinai: La conservazione del mosaico della Trasfigurazione* (Rome, 2006).
29. I. Ševčenko in G. Forsyth and K. Weitzmann, *The Monastery of St Catherine at Mount Sinai: The Church and Fortress of Justinian* (Ann Arbor, 1973), 19.
30. Weitzmann, 'The mosaic in St. Catherine's monastery', 392–405.
31. Sun of Justice: J. Miziołek, '*Transfiguratio Domini* in the apse at Mount Sinai and the symbolism of light', *Journal of the Warburg and Courtauld Institutes* 53 (1990), 42–60. Pilgrimage: J. Elsner, 'The viewer and the vision: the case of the Sinai apse', *Art History* 17 (1994), 81–102; S. Coleman and J. Elsner, 'The pilgrim's progress: art, architecture and ritual movement at Sinai', *World Archaeology* 26 (1994), 73–89; two natures: A. Andreopoulos, 'The mosaic of the Transfiguration in St Catherine's Monastery on Mt Sinai: a discussion of its origins', *Byzantion* 72 (2002), 9–41.
32. J. McKenzie, *The Architecture of Alexandria and Egypt 300 BC–AD 700* (London, 2007), 291, 309, 295. At 321, she makes the case for Alexandria's importance in artistic terms and as a possible centre for mosaic-making and suggests that it may even have influenced mosaics in Thessaloniki.
33. As A. H. S. Megaw, Director of Antiquities on Cyprus 1935–60, claimed in his 'Byzantine architecture and decoration in Cyprus: metropolitan or provincial?', *DOP* 28 (1974), 74: 'Glass tesserae have been found among the remains of many early churches in Cyprus and many more would have been decorated with wall mosaics'; also see A. H. S. Megaw, 'Interior decoration in Early Christian Cyprus', *Actes du XVe Congrès international d'études byzantines* (Athens, 1979–81), vol. 4, 3–29. On this glass, see O. Bonnerot, A. Ceglia and D. Michelides, 'Techniques and materials of Early Christian Cypriot wall mosaics', *Journal of Archaeological Science Reports* 7 (2016), 649–61.

34. A. H. S. Megaw, 'Mosaici parietali paleobizantini di Cipro', *32nd Corso di cultura sull'arte ravennate e bizantina* (Ravenna, 1985), 173–98.
35. A. H. S. Megaw and E. J. W. Hawkins, *The Church of the Panaghia Kanakaria at Lythrankomi in Cyprus: Its Mosaics and Frescoes* (Washington, DC, 1977). Since Megaw and Hawkins wrote, the mosaics have been illegally removed from the church, then retrieved, and are now displayed in the Archepiscopal Museum in Nikosia.
36. Megaw and Hawkins, *Panaghia Kanakaria*, 62.
37. M. Sacopoulo, 'Mosaïque de Kanakaria (Chypre): essai d'exégèse de la "mandorla"', *Actes del VIII Congreso internacional de arqueologia cristiana (Barcelona 5–11 octubre, 1969)* (Vatican CIty, 1972), 445–6; M. Sacopoulo, *La Théotokos à la mandorle de Lythrankomi* (Paris, 1975).
38. Sacopoulo, *La Théotokos*, interprets the mosaic as a statement of Orthodoxy in face of Monophysite threats: Mary's presence inside the mandorla says less about her divinity and more about her role as the 'humaniser' of Christ.
39. As noted earlier, Kiti has never been satisfactorily published. Best on it is David Winfield in his *Byzantine Mosaic Work: Notes on History, Technique and Colour* (Lefkosia, 2005), who actually dates it to the fifth century. Also see A. M. Foulias, *The Church of the Panagia Angeloktistos at Kiti near Larnaka* (Nikosia, 2004), who sees it as sixth century, as does R. S. Cormack, *Byzantine Art* (Oxford, 2000), 53.
40. A. H. S. Megaw and E. J. W. Hawkins, 'A fragmentary mosaic of the Orant Virgin in Cyprus', in *Actes du XIVe Congrès des études byzantines, Bucarest, 6–12 septembre 1971* (Bucharest, 1976), 363–6. Robin Cormack generously gave me access to Ernest Hawkins' notes on this mosaic on which this article is clearly based.
41. I have only seen Megaw's pictures of this mosaic, but from those images I see no obvious reason to rule out the mosaic being later in date.
42. At Kourion, pieces of mosaics from two Church Fathers and an archangel were excavated: A. H. S. Megaw, 'Excavations at the episcopal basilica at Kourion 1974–1975. A preliminary report', *DOP* 30 (1976), 345–74; D. Michaelides, 'A catalogue of Hellenistic, Roman and early Christian mosaics of Cyprus with representations of human figures', *Report of the Department of Antiquities of Cyprus, 1987*, 239–52.
43. Megaw, 'Byzantine architecture and decoration'; C. A. Stewart, 'The first vaulted churches in Cyprus', *Journal of the Society of Architectural Historians* 62 (2010), 162–89.
44. L. Zavagno, 'At the edge of two empires. The economy of Cyprus between late Antiquity and the Early Middle Ages (650s–800s AD)', *DOP* 65 and 66 (2011–12), 121–56.
45. There are very useful introductions to these images and Marian theology in ed. M. Vassilaki, *Mother of God: Representations of the Virgin in Byzantine Art* (Milan, 2000), especially A. M. Cameron, 'The early cult of the Virgin', 3–16 and R. Cormack, 'The Mother of God in apse mosaics', 91–105.
46. Megaw, 'Byzantine architecture and decoration'.
47. Megaw, in *ibid.*, compared Lythrankomi with Hosios David and the lost mosaics of St Demetrios, which would move it into the fifth century; Sacopoulou saw iconographic parallels with Ravenna and the sixth-century mosaics there.
48. As with the glass at Maroni Petrera: I. C. Freestone, M. Ponting and M. J. Hughes, 'The origins of Byzantine glass from Maroni Petrera, Cyprus', *Archaeometry* 44 (2002), 257–72.
49. R. S. Cormack, 'The mosaic decoration of S Demetrios, Thessaloniki. A re-examination in light of the drawings of W. S. George', *Annual of the British School at Athens* 64 (1969), 17–52; R. S. Cormack, 'The church of St Demetrios: the watercolours and drawings of W. S. George', in *Catalogue of an Exhibition Organised by the British Council* (Thessaloniki, 1985), 52–7. Although I discuss them all here, it is possible that some of these mosaics were fifth, some sixth and some seventh century.
50. As argued by L. Brubaker, 'Elites and patronage in early Byzantium: the evidence from Hagios Demetrios at Thessalonike', in eds. J. Haldon and L. I. Conrad, *Elites Old and New in the Byzantine and Early Islamic Near East* (Princeton, 2004), 63–90. Oddly, the cycle is not described in the *Miracles of St Demetrios*.
51. A. Antonaras, 'Early Christian glass finds from the Museum Basilica, Philippi', *Journal of Glass Studies* 49 (2007), 47–57.
52. R. Ousterhout, 'Survey of the Byzantine settlement at Canli Kilisse in Cappadocia: results of the 1995 and 1996 seasons', *DOP* 51 (1997), 301–6, at 305; M. H. Ballance, 'Cumanin Cami'i at Antalya: a Byzantine church', *Papers of the British School at Rome* 23 (1955), 99–114.
53. Eustratios, *Life of St Eutychius*, ch. 53: *PG* 86, 2333, and C. Mango, *Art of the Byzantine Empire: Sources and Documents* (Toronto, 1974), 133–4.
54. Weitzmann, 'The mosaic in St. Catherine's monastery', quote at 405.
55. All are described by Mackie, *Early Christian Chapels*. For S. Prosdocimus, see also I. Andreescu-Treadgold, 'Santa Giustina di Padova: considerazioni preliminari sui frammenti di mosaico parietale', in ed. C. Angelilli, *AISCOM* 14 (Rome, 2009), 349–58.
56. J. Moorhead, *Theoderic in Italy* (Oxford, 1992).
57. M. Johnson, 'Towards a history of Theoderic's building programme', *DOP* 42 (1988), 73–96, who also sees echoes of the Great Palace of Constantinople in Theoderic's palace.
58. See D. M. Deliyannis, *Ravenna in Late Antiquity* (Cambridge, 2010), 120–1.
59. *Ibid.* 132.
60. M. Dunn, *Belief and Religion in Barbarian Europe c. 350–700* (London, 2013). Arianism was yet another theological dispute, Trinitarian rather than about the nature of Christ, though the two are inevitably related, and this time dating originally to the fourth century. Arius, a priest of Alexandria (d. 336), proposed that Christ was a

creation of God the Father, rather than his son born of Mary. So rather than a co-equal Trinity of Father, Son and Spirit, God the Father was the superior figure and the Holy Spirit was created by Christ and/or God. It was a very popular belief held by several emperors including Constantine the Great's son, Constantius, increasingly accepted in Italy and the Balkans, especially by the 'barbarians', but condemned by the first Church Council of Constantinople in 381.

61. Various Arian churches were built throughout the city and mosaics are recorded in at least one, the Arian Cathedral, now the Church of Santo Spirito. Other fragments have been found in excavations throughout the city and in Classe and Caesarea.
62. Deliyannis, *Ravenna*, 180–7.
63. A. J. Wharton, 'Ritual and reconstructed meaning: the Neonian Baptistery in Ravenna', *Art Bulletin* 69 (1987), 358–76; ed. C. Muscolino, A. Ranaldi and C. Tedeschi, *Il Battistero Neoniano* (Ravenna, 2011).
64. The cross is in line with Christ's head and the dove but is upside down. For an account of the differences and similarities with the Orthodox Neonian Baptistery, see Deliyannis, *Ravenna*, 182; also on how the mosaics may have generically included the Ostrogoths.
65. The church was dedicated by Theoderic to Christ and, on its conversion to Orthodoxy, rededicated to St Martin. It was known as S. Apollinare Nuovo by the late ninth century.
66. Deliyannis, *Ravenna*, 146–74. For details and dates of the restorations, see ed. C. Muscolino, *Sant'Apollinare Nuovo: un cantiere essemplare* (Ravenna, 2012). For the sake of completeness, there is also a small piece of mosaic now at the west end of the church and labelled 'Justinian', which may belong to the sixth century. The label is from the restoration of the fragment in 1863 and the fragment has also been identified as Theoderic. It has been damaged and restored on several occasions and is unlikely ever to have been a 'portrait' in the sense of a true likeness.
67. This is the most widely accepted consensus: A. Urbano, 'Donation, dedication, and *damnatio memoriae*: the Catholic reconciliation of Ravenna and the Church of Sant'Apollinare Nuovo', *Journal of Early Christian Studies* 13 (2005), 93 and n.57, though see Johnson, 'Theoderic's building programme', 90.
68. Deliyannis, *Ravenna*, 164.
69. This was the view of O. von Simson, *Sacred Fortress* (Chicago, 1948), 71; Urbino, 'Donation, dedication', 105–6 and n.93; also Deliyannis, *Ravenna*, 170.
70. Deliyannis, *Ravenna*, 191. This was located on the top floor of a three-storey addition to the archbishop's palace close to the Orthodox cathedral and seems to have been a private chapel for the archbishops. Bishop Peter seems to have put money into other churches, including that at Classe, and a baptistery, perhaps with mosaics.
71. For restorations to the mosaics see Deliyannis, *Ravenna*, 196.
72. For the Archbishop's Chapel and S. Apollinare Nuovo as products of the same workshop see G. Galassi, 'Roma o Bisanzio', in *I mosaici di Ravenna e le origini dell'arte italiana* (Rome, 1953), vol. 1, 79–81, and Urbino 'Donation, dedication', 105.
73. See Deliyannis, *Ravenna*, 118.
74. Johnson, 'Theoderic's building programme', 74–5, 77.
75. Deliyannis, *Ravenna*, 224, on issues over donors.
76. What remains of this mosaic is said to be in the Bode Museum in Berlin, though see I. Andreescu-Treadgold, 'The Christ head at the Metropolitan Museum of Art, New York, the apse in the Bode Museum and other fake mosaics', in eds. C. Entwistle and L. James, *New Light on Old Glass: Recent Research on Byzantine Mosaics and Glass* (London, 2013), 271–90.
77. Deliyannis, *Ravenna* 213.
78. For timings see *ibid.* 226
79. Described in detail in *ibid.* 223–50.
80. *Ibid.* 236. For discussion of phases in the mosaics and of restorations, see eds. A. M. Iannucci, C. Fiori and C. Muscolino, *Mosaici a S. Vitale e altri restauri* (Ravenna, 1992), and in that volume, I. Andreescu-Treadgold, 'The mosaic workshop at San Vitale', 31–41.
81. K. Gulowsen, 'Liturgical illustrations or sacred images? The imperial panels in S. Vitale, Ravenna', *ActaNorv* 11 (1999), 117–46, provides a good summary of much of the earlier art historical literature on the panels. On gender issues, C. Barber, 'The imperial panels at San Vitale: a reconsideration', *Byzantine and Modern Greek Studies* 14 (1990), 19–43.
82. On the question of identity, see I. Andreescu-Treadgold and W. T. Treadgold, 'Procopius and the imperial panels of S. Vitale', *Art Bulletin* 79 (1997), 708–23.
83. Urbino, 'Donation, dedication'.
84. Spelt out in von Simson, *Sacred Fortress*.
85. Deliyannis, *Ravenna*, 259–74. That the church continued to be refurbished throughout its history suggests its importance. Bishop John II (578–95) and the Byzantine exarch Smaragdus added a chapel to the church and decorated it with mosaics.
86. *Ibid.* 263 and n.103 for these as carved on site.
87. *Ibid.* 269; L. Abramowski, 'Die mosaiken von S. Vitale und S. Apollinare in Classe und die Kirchenpolitik Kaiser Justinians', *Zeitschrift für antikes Christentum* 5 (2001), 289–340, argues that the programme of the mosaic was in support of Justinian's Christology.
88. Deliyannis, *Ravenna*, 266 and n.306.
89. J. F. Romano, *Liturgy and Society in Early Medieval Rome* (Farnham, 2014), 2 and 38.
90. Deliyannis, *Ravenna*, 170, offers various further interpretations.
91. Urbano, 'Donation, dedication', suggests that the Byzantines were looking to disparage the Ostrogoths rather than obliterate them.
92. *Ibid*.
93. Mackie, *Early Christian Chapels*, 48; there was also mosaic at S. Caterina in Pula, perhaps outside and inside the church: *ibid.* 50.
94. A. Terry and H. Maguire, *Dynamic Splendor: The Wall Mosaics in the Cathedral of Eufrasius at Poreč* (Philadelphia, 2007), 71, call it a 'small church' and

suggest that Poreč was not a very important town. There is no definitive date for the construction of the church: it is dated mainly on the likely identity of Bishop Eufrasius and through comparisons with Ravenna, especially S. Vitale.

95. The mosaics have been considerably restored: see *ibid*. It is not known whether there were any other mosaics in the church.
96. *Ibid.* 4 and n.12. It is not clear whether the palace was also built by Eufrasius.
97. H. Maguire, 'Eufrasius and friends: on names and their absence in Byzantine art', in ed. L. James, *Art and Text in Byzantine Culture* (Cambridge, 2007), 139–60.
98. Terry and Maguire, *Dynamic Splendor*, 130–1.
99. *Ibid.* 128 on.
100. *Ibid.* 137; they also detail other Incarnation elements, as well as aspects that might indicate a Trinitarian significance, 128–9. If these elements at Poreč are Trinitarian, then the same argument might be extended to the mosaics of St Catherine's and Kartmin.
101. Terry and Maguire, *ibid.* ch. 3, 59–69, outline these points of comparison with Ravenna – for example, both Poreč and Ravenna share a use of mother-of-pearl.
102. After the defeat of the Ostrogoths, the church seems not to have been used until Pope Gregory I rededicated it in *c.* 591/2 to S. Agatha. On Theoderic's building in Rome, R. Westall, 'Theoderic, patron of the churches of Rome', *ActaNorv* 27 (2014), 119–38.
103. It is a long and complicated story and I cannot do justice to it here but see, for example, T. F. X. Noble, *The Republic of St Peter* (Philadelphia, 1984).
104. A basilica dedicated to St Andrew and an oratory to S. Croce both at St Peter's.
105. H. Brandenburg, *Ancient Churches of Rome* (Turnhout, 2005), 205.
106. S. Sande, 'Old and new in Old and New Rome', *ActaNorv* 17 (2003), 101–14, suggests that delays in building in the Forum came from Roman conservatism and that the church both is on the edge of the Forum and faces away from it. On mosaic restorations in SS. Cosmas and Damian see V. Tiberià, *Il restauro del mosaico della basilica dei Santi Cosma e Damiano a Roma* (Todi, 1991); V. Tiberià, 'Mosaici restaurati nella basilica dei SS. Cosma e Damiano a Roma', in eds. Ianucci et al., *Mosaici a S. Vitale e altri restauri*, 111–32; on Felix converting the existing Roman building to a church, G. Biasiotti and P. B. Whitehead, 'La chiesa dei SS. Cosma e Damiano al Foro Romano e gli edifici preesistenti', *Atti della Pontifica academia romana di archeologia*, 3rd ser., Rendiconti 3 (1924–25), 83–122; R. Krautheimer et al., *Corpus Basilicarum Christianarum Romae: The Early Christian Basilicas of Rome (IV–IX Centuries)*, 5 vols. (Rome, 1937–77), vol. 1, 137–43; P. L. Tucci, 'Nuove acquisizioni sulla basilica dei santi Cosma e Damiano', *Studi Romani* 49 (2001), 275–93; R. Budriesi, *La basilica dei SS. Cosma e Damiano a Roma* (Bologna, 1968); Brandenburg, *Ancient Churches*, 222–30. L. Pani Ermini, 'Lo "spazio cristiano" nella Roma del primo millenio', in *Christiana loca: lo spazio cristiano nella Roma del primo millenio* (Rome: Fratelli Palombi, 2000), 15–37, suggests that the dedication to Cosmas and Damian meant Byzantine influences.
107. J. Osborne, 'The Jerusalem Temple treasure and the Church of SS. Cosmas and Damian in Rome', *Papers of the British School at Rome* 76 (2008), 173–81. P. Whitehead, 'The church of SS. Cosmas and Damian in Rome', *American Journal of Archaeology* 3 (1927), 1–18.
108. Brandenburg, *Ancient Churches*, 222.
109. See T. F. Mathews, *The Clash of Gods: A Reinterpretation of Early Christian Art* (Princeton, 1993, reprint 1999), 168–9, for a suggestion as to why Theodore was included.
110. There is a great deal of debate as to whether the mosaics of the apse and the triumphal arch are of the same date. Although a technical analysis of some of the mosaic tesserae in Tiberià, *Il mosaico restorato*, 81–7, suggested that the glass of the apse and arch were similar, nonetheless Tiberià elects to agree with G. Matthiae, *SS. Cosma e Damiano e S. Teodoro* (Rome, 1948), 49–65, who made a case for the arch mosaics dating to the pontificate of Sergios I (687–701). J. L. Opie, 'Agnus Dei', in eds. F. Guidobaldi and A. G. Guidobaldi, *Ecclesiae Urbis: Atti del Congresso internazionale di studi sulle chiese di Roma (IV–X secolo)* (Vatican City, 2002), vol. 3, 1813–40; R. Wisskirchen, 'Zur Apsisstenwand von SS. Cosma e Damiano/Rom', *Jahrbuch für Antike und Christentum* 42 (1999), 169–83.
111. P. J. Nordhagen, 'Un problema di carattere iconografico e tecnico a S. Prassede', in *Roma e l'età carolingia: Atti delle giornate di studio* (Rome, 1976), 159–66, suggests Cosmas and Damien as the prototype.
112. Andaloro/Romano A1, 77–94; A. Taddei, 'La decorazione dell'intrados dell'arce trionfale della basilica di San Lorenzo fuori le mura', in eds. Guidobaldi and Guidobaldi, *Ecclesiae Urbis*, 1763–88; C. Belting-Ihm, 'Zum Verhältnis von Bildprogrammen und Tituli in der Apsisdekoration früher westlischer Kirchenbauten', in *Testo e imagine nell'alto medioevo* (Spoleto, 1994), vol. 2, 839–84, suggested it showed Laurence with his gridiron.
113. These are usually understood as all original and sixth century but it seems likely that the mosaics were damaged when the church was bombed in 1943.
114. O. Nicholson, 'Golden age and end of the world: myths of Mediterranean life from Lactantius to Joshua the Stylite', in eds. M. J. Chiat and K. L. Reyerson, *The Medieval Mediterranean: Cross-cultural Contacts* (St. Cloud, MN, 1989), 11–18.
115. Scenes of the histories of the apostles are mentioned in an eighth-century letter from Pope Hadrian I to Charlemagne.

8 NEW BEGINNINGS?

1. I have been unable to check the reference in R. R. Parker Johnson, Compositiones variae *from Codex 490, Biblioteca*

Capitolare, Lucca, Italy: An Introductory Study (Urbana, 1939), 73, to a mosaicked basilica built by the Lombard king Liutprand and mentioned by Jan Gruter, *Inscriptiones antiquae* (Amsterdam, 1707), vol. 2, 1168, no. 8.

2. Also see the material from Qasr Mushatta: C. Hamarneh, 'Understanding early Islamic mosaic production: archaeometric study of material from Qasr Mushatta', *Mediterranean Archaeology and Archaeometry* 15 (2015), 249–58.
3. G. Fisher, 'Kingdoms or dynasties? Arabs, history, and identity before Islam', *Journal of Late Antiquity* 4 (2011), 245–67; R. Schick, *The Christian Communities of Palestine from Byzantine to Islamic Rule* (Princeton, 1995), 317; F. B. Flood, 'Faith, religion and the material culture of early Islam', in ed. H. C. Evans with B. Ratliff, *Byzantium and Islam: Age of Transition, Seventh to Ninth Centuries* (New York, 2012), 244–57. I am aware that phrases like 'Islamic society' and the 'Islamic world' are as gross simplifications of a complex picture as 'Byzantine society' is.
4. N. M. El Cheik, *Byzantium Viewed by the Arabs* (Cambridge, Mass., 2004), 54–5, with details about the gradual adaptation to a distinctive Muslim state.
5. See the discussion and critique in H. Kennedy, 'The last century of Byzantine Syria: a reinterpretation', *Byzantinische Forschungen* 10 (1985), 141–84.
6. G. Avni, *The Byzantine–Islamic Transition in Palestine: An Archaeological Approach* (Oxford, 2014); A. Walmsley, *Early Islamic Syria: An Archaeological Assessment* (London, 2013); Schick, *The Christian Communities.* L. Zavagno, 'At the edge of two empires. The economy of Cyprus between Late Antiquity and the early middle ages (650s–800s AD)', *DOP* 65 and 66 (2011–12), 121–56, makes the same point about Cyprus. For an alternative view, H. Kennedy, 'From *polis* to *madina*: urban change in Late Antique and Early Islamic Syria', *Past and Present* 106 (1985), 3–27; Kennedy, 'The last century of Byzantine Syria'.
7. Schick, *The Christian Communities*, 119; Avni, *The Byzantine–Islamic Transition*, 97–8.
8. J. Beaucamp and C. Robin, 'Le christianisme dans la péninsule arabique d'après l'épigraphie et l'archéologie', *Travaux et mémoires* 8 (1981), 45–62.
9. I. Shahîd, 'Byzantium in South Arabia', *DOP* 33 (1979), 23–94; G. R. D. King, 'Some Christian wall-mosaics in pre-Islamic Arabia', *Proceedings of the Seminar for Arabic Studies* 10 (1980), 37–43: for Sana'a, the earliest textual reference is eighth century. G. R. D. King, 'Origins and sources of the Umayyad mosaics in the Great Mosque in Damascus', unpublished PhD thesis, School of Oriental and African Studies, University of London, 1976, gives an essential account of evidence for wall mosaics in the region, and clearly shows that there was a lot of it.
10. King, 'Some Christian wall-mosaics', 41 and n.23. G. Fowden, 'Late-antique art in Syria and its Umayyad evolutions', *Journal of Roman Archaeology* 17 (2004), 282–304.
11. K. A. C. Creswell, *Early Muslim Architecture,* vol. 1: *Umayyads AD 622–750* (Oxford, 1932–40; second edition Oxford, 1969; page references are to the second edition unless noted), 65–131; O. Grabar, 'The Umayyad Dome of the Rock in Jerusalem', *Ars Orientalis* 3 (1959), 33–62; O. Grabar, *The Dome of the Rock* (Cambridge, Mass., 2006); G. Necipoğlu, 'The Dome of the Rock as palimpsest: 'Abd al-Malik's grand narrative and Sultan Süleyman's glosses', *Muqarnas* 25 (2008), 17–105; O. Grabar, 'The meaning of the Dome of the Rock', in eds. M. J. Chiat and K. L. Reyerson, *The Medieval Mediterranean: Cross-cultural Contexts* (St. Cloud, MN, 1988), 1–10, suggests that it may have been begun by Mu'awiyah as an expression of his rulership, creating a dynastic shrine in Jerusalem; A. Elad, 'Why did Abd al-Malik build the Dome of the Rock? A re-examination of the Muslim sources', in eds. J. Raby and J. Johns, *Bayt al-Magdis: Abd al-Malik's Jerusalem* (Oxford, 1992), vol. 1, 233–58; N. Rabbat, 'The Dome of the Rock revisited: some remarks on al-Wasiti's accounts', *Muqarnas* 10 (1993), 68–75. S. Blair, 'What is the date of the Dome of the Rock?', in eds. Raby and Johns, *Bayt al-Magdis*, 59–87, argues that 691 marks the beginning of work on the building; her arguments were accepted by O. Grabar, *The Shape of the Holy: Early Islamic Jerusalem* (Princeton, 1996), 115, and criticised by J. Johns, 'Archaeology and the history of early Islam: the first seventy years', *Journal of the Economic and Social History of the Orient* 46 (2003), 411–36, esp. 424–7.
12. Grabar, *The Shape of the Holy*. S. Nuseibeh and O. Grabar, *The Dome of the Rock* (New York, 1996), provide very full pictures of the mosaics. Also see A. George, 'Calligraphy, colour and light in the Blue Qur'an', *Journal of Qur'anic Studies* 11 (2009), 75–125, esp. 95–101 on the proportions of the building and its links to Late Roman and Christian buildings.
13. Creswell, *Early Muslim Architecture*, vol. 1, e.g. 64, 123, saw it as a thoroughly Syrian building built by Syrian architects.
14. There have also been considerable restorations made to the mosaics, the dates of which are unclear. See M. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque in Damascus', in Creswell, *Early Muslim Architecture*, vol. 1, 246–322, and Grabar, *The Shape of the Holy*, e.g. at 82.
15. See M. Gautier-van Berchem, 'Anciens décors de mosaïques de la salle de prière dans la mosquée des Omeyyades à Damas', *Mélanges de l'Université Saint-Joseph* 46 (1970–71), 287–304; and her discussion in 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', section III, 'Decorative motifs', 252; and the response by H. Stern, 'Notes sur les mosaïques du Dôme du Rocher et de la Mosquée de Damas à propos d'un livre de Mme Marguerite Gautier van Berchem', *CahArch* 22 (1972), 201–32.
16. At S. Sabina, for example, though at St Catherine's, Mount Sinai, the inscription is blue letters on a gold background. George, 'Calligraphy, colour and light in

the Blue Qur'an'. Specifically see M. Milwright, *The Dome of the Rock and its Umayyad Mosaic Inscription* (Edinburgh, 2016).

17. Some of this debate is about how far the Umayyads looked back to Arabia and traditions of Arabian art and aesthetics. The relationship between textiles and wall mosaics is, however, also an interesting one in Byzantine and Western medieval art.
18. Grabar, *The Shape of the Holy*, 73–6, on ways of viewing the mosaics.
19. George, 'Calligraphy, colour and light', discusses how they respond to the same requirements set out on the same template in slightly different ways. Also see A. George, *The Rise of Islamic Calligraphy* (London, 2010).
20. George, 'Calligraphy, colour and light', 86, wonders if a geometric codification of script could have come from monumental mosaic inscriptions.
21. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 311.
22. For Baysan, see E. Khamis, 'Two wall mosaic inscriptions from the Umayyad market place in Bet Shean/Baysan', *Bulletin of the School of Oriental and African Studies* 64 (2001), 159–76, esp. 164.
23. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 252–96; Grabar, *The Shape of the Holy*. S. Naef, 'Islam and images: a complex relationship', in eds. M. Campagnolo, P. Magdalino, M. Matiniani-Reber and A.-L. Rey, *L'aniconisme dans l'art religieux byzantine* (Geneva, 2014), 49–57.
24. Grabar, *The Shape of the Holy*.
25. C. Kessler, ''Abd al-Malik's inscription in the Dome of the Rock', *Journal of the Royal Asiatic Society* 102.1 (1970), 1–14, length at 2–3; Grabar, *The Shape of the Holy*, translates the texts and discusses their meaning and function.
26. Grabar, 'The meaning of the Dome of the Rock'.
27. Grabar, *ibid.*, comments on the significance of writing in this period and how text replaced images on al-Malik's coins.
28. Medina: J. Sauvaget, *La mosquée omeyyade de Médine* (Paris, 1947). Ibn 'Abdrabbuh, writing in *c.* 940, described it as a 'marvel of art': its walls were covered in gold cubes, there were representations of trees with fruits; and the whole prayer room was decorated thus. Great Mosque: Creswell, *Early Moslem Architecture*, vol. 1, 142–210; E. de Lorey and M. van Berchem, 'Les mosaïques de la Mosquée des Omayyads à Damas', *Monuments et mémoires: de la fondation Eugène Piot* 30 (1929), 111–40 and Gautier-van Berchem, 'Mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 323–72; F.B. Flood, *The Great Mosque of Damascus. Studies on the making of an Umayyad visual culture* (Leiden, 2001); G. H. Salies, 'Die Mosaiken der Grossen Mochee von Damaskos', *35th Corso di Cultura sull'arte Ravennate e Bizantina* (Ravenna 1988), 295–313.
29. Flood, *The Great Mosque*.
30. R. Grafman and M. Rosen-Ayalon, 'The two great Syrian Umayyad mosques: Jerusalem and Damascus', *Muqarnas* 16 (1999), 1–15. B. J. Walker, 'Commemorating the sacred spaces of the past: the Mamluks and the Umayyad mosque at Damascus', *Near Eastern Archaeology* 67 (2004), 26–39, has details on the restorations. L. Simonis, *Les relevés des mosaïques de la grande mosquée de Damas* (Paris, 2012), produced by the Louvre, has a very useful introduction to the French work on the mosaics in the late nineteenth and early twentieth centuries and the holdings on them in the Louvre.
31. E. de Lorey, 'L'hellénisme et l'Orient dans les mosaïques des Omaiyades', *Ars Islamica* 1 (1934), 22–45; Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 325–63. For tilting see E. de Lorey, *Les mosaïques de la Mosquée des Omayyades à Damas* (Paris, 1931), 24. Also see the discussion of the mosaics in J. McKenzie, *The Architecture of Alexandria and Egypt, 300BC–AD700* (New York, 2007), 362–7, and J. McKenzie, 'Alexandria on the Barada. The mosaics of the Great Mosque in Damascus', in eds. C. Entwistle and L. James, *New Light on Old Glass: Recent Research on Byzantine Mosaics and Glass* (London, 2013), 291–309, making a strong case for Alexandrian links.
32. M. Georgopoulou, 'Geography, cartography and the architecture of power in the mosaics of the Great Mosque of Damascus', in ed. C. Anderson, *The Built Surface* (Aldershot, 2002), vol. 1, 47–74
33. Flood, *The Great Mosque*, 75.
34. Mackenzie, 'Alexandria on the Barada', arguing for this association between Damascus and Alexandria.
35. As Georgopoulou, 'Geography, cartography', saw.
36. Al-Idrisi translated by G. Le Strange, *Palestine under the Moslems: A Description of Syria and the Holy Land from AD 650 to 1500 Translated from the Works of the Mediaeval Arab Geographers* (London, 1890, reprinted Beirut, 1965), 238–9.
37. Flood, *The Great Mosque*, 215.
38. *Ibid.* 2.
39. El Cheik, *Byzantium Viewed*, 58; Georgopoulou, 'Geography, cartography'.
40. For Ibn Asakir see N. Elisseef, *La description de Damas d'Ibn Asakir* (Damascus, 1959), 66, section 44 of the text. Also El Cheik, *Byzantium Viewed*, 58–9, and Flood, *The Great Mosque*, 243.
41. Flood, *The Great Mosque*, 225, on internal audiences; also R. Hillenbrand, *Islamic Architecture: Form, Function and Meaning* (Edinburgh, 1994), 68.
42. A. Walmsley and K. Daumgaard, 'The Umayyad mosque of Jarash in Jordan and its relationship to early mosques', *Antiquity* 79 (2005), 362–78.
43. Flood, *The Great Mosque*, 197–202, and M. Greenhalgh, *Marble Past, Monumental Present: Building with Antiquities in the Medieval Mediterranean* (Leiden, 2008), for trade in *spolia*. Mosaics were also used in Umayyad palace buildings. O. Grabar, 'Umayyad palaces reconsidered', *Ars Orientalis* 23 (1993), 93–108.
44. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 229; G. Marçais, 'Fusayfisa', in ed. H. A. R. Gibb et al.,

Encyclopaedia of Islam (Leiden, 1960–2009, second edition), vol. 2, 955–7.

45. See for example Stern, 'Notes sur les mosaïques du Dôme du Rocher et de la Mosquée de Damas', 223.
46. For example, Theophilus of Edessa, astrologer at the court of the caliphs from the 750s to the 780s and writing in Syriac: tr. R. G. Hoyland, *Theophilus of Edessa's Chronicle* (Liverpool, 2011), 200. Would it be fair to say 'they wouldn't, would they?'
47. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 229–45, for texts, both Muslim and Christian.
48. *Ibid.* 231.
49. H. A. R. Gibb, 'Arab–Byzantine relations under the Umayyad Caliphate', *DOP* 12 (1958), 225; A. Cutler, 'Gifts and gift exchange as aspects of the Byzantine, Arab, and related economies', *DOP* 55 (2001), 247–78: see on al-Tabari, 254 n.36; El Cheik, *Byzantium Viewed*, 57.
50. El Cheik, *Byzantium Viewed*, 57.
51. Abu Bakr Muhammad ibn Ahmad al-Wasiti, *Fada'il al-Bayt al-Muqqadas* (Jerusalem, 1979), 80–1, account no. 136; Rabbat, 'The Dome of the Rock revisited', 68–9 and n.8.
52. Cutler, 'Gifts and gift exchange': for the conversion of gold from mithqals to kilos, see 254 n.35. Flood, *The Great Mosque*.
53. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 234–5.
54. Gibb, 'Arab–Byzantine relations' 229, suggests that this is reliable because Ibn Zabala is a reliable source.
55. Cutler, 'Gifts and gift exchange'.
56. The material in this table is a summary of the sources given by Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 231–45.
57. The debate is on-going. Stern, 'Notes sure les mosaïques du Dôme du Rocher', was critical of Gautier-van Berchem's analysis in the first edition of Creswell, *Early Muslim Architecture*, vol. 1, 149–52, as was Gibb, 'Arab–Byzantine relations', who is strongly in favour of Byzantine mosaicists. Gautier-van Berchem responded to Gibb in the second edition of *Early Muslim Architecture*, vol. 1, 244–5. Creswell himself (K. A. C. Creswell, 'The legend that al-Walid asked for and obtained help from the Byzantine emperor. A suggested explanation', *Journal of the Royal Asiatic Society* 88 (1956), 142–5) was unconvinced and suggested that the story was a garbled account relating back to the sixth-century church at Sana'a, built with support from Justinian. Flood, *The Great Mosque*, tends to the Gibb view, whilst McKenzie, 'Alexandria on the Barada', sees no reason why the craftsmen could not have been local.
58. Argued by A. Papadopoulo, 'La Grande Mosquée omeyyade de Médine et l'invention du mihrâb en forme du niche', in ed. A. Papadopoulo, *Le miḥrāb dans l'architecture et la religion muselmanes* (Leiden, 1988), 83–92.
59. Flood, *The Great Mosque*, 20–1.
60. On issues in Arab historiography, see C. F. Robinson, *Islamic Historiography* (Cambridge, 2003).
61. See Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 244–5.
62. J. M. Bloom, 'The revival of Early Islamic architecture by the Umayyads of Spain', in eds. Chiat and Reyerson, *The Medieval Mediterranean*, at 37–8, questions the historicity of al-Rahman's appeal to the emperor.
63. As Cutler, 'Gifts and gift exchange', 253–4, proposed. Also see the discussion of O. Grabar, *The Formation of Islamic Art* (New Haven, 1987), 58–63.
64. Gautier-van Berchem, 'Mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 231.
65. El Cheikh, *Byzantium Viewed*, 21–4, on Arab terminology for the Byzantines; K. Durak, 'Who are the Romans? The definition of *Bilād al-Rūm* (Land of the Romans) in medieval Islamic Geographies', *Journal of Intercultural Studies* 31 (2010), 285–98.
66. Necipoğlu, 'The Dome of the Rock as palimpsest'. C. Mango, 'The Temple Mount AD 614–638', in eds. Raby and Johns, *Bayt al-Magdis*, 1–16, for a seventh-century Greek account of how an archdeacon of the church of St Theodore, who was a marble-setter by profession, volunteered to help build the mosque (and eventually died in an accident).
67. See M. van Lohuizen-Mulder, 'The mosaics in the Great Mosque at Damascus: a vision of beauty', *Bulletin antike beschaving: babesch* 70 (1995), 204 for references.
68. A. George, *The Rise of Islamic Calligraphy* (London, 2010), 86.
69. *Ibid.* 75, 101.
70. See Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 233. Theophanes, AM 6183, described Abd al-Malik's instructions for the removal of materials from Gethsemane to build at Mecca but said that Justinian II was persuaded to send columns to prevent this. Mango and Scott, *Chronicle*, 510, n.5, note that this story 'presumably' came from a Syro-Palestinian source and is otherwise unattested.
71. For 'good stories' see R. Scott, 'Text and context in Byzantine historiography', in ed. L. James, *A Companion to Byzantium* (Oxford, 2010), 251–62. In fact, a question overlooked in the hunt for artists' origins is that raised by J. M. Rogers, 'Architectural history as literature: Creswell's reading and methods', *Muqarnas* 8 (1991), 45–54, at 53: how free were the craftsmen to work and how far did their patrons impose both themes and manners of representation on the mosaicists?
72. A. Shboul, 'Byzantium and the Arabs: the images of the Byzantines as mirrored in Arabic literature', in eds. E. and M. Jeffreys and A. Moffatt, *Byzantine Papers* (Canberra, 1981), 43–68; N. M. El Cheikh, 'Byzantium through the Islamic prism from the twelfth to the thirteenth century', in ed. A. Laiou, *Crusades from the Perspective of the Byzantine and Muslim Worlds* (Washington, DC, 2001), 53–69, demonstrates that there was a twelfth- and thirteenth-century Muslim belief in the Byzantines as unequalled builders and great painters.

73. Flood, *The Great Mosque*, 229, on the element of one-upmanship in some of these stories.
74. Theophanes, AM 6199.
75. Flood, *The Great Mosque*, 22 and 232; El Cheikh, *Byzantium viewed*, 55, 56, 58.
76. Raqqa: J. Henderson, 'Archaeological and scientific evidence for the production of early Islamic glass at al-Raqqa, Syria', *Levant* 31 (1999), 225–40; Jewish glass-makers in J. Raby, 'In vitro veritas. Glass pilgrim vessels from 7th-century Jerusalem' and 'App. 1: the lozenge and the circle', in ed. J. Johns, *Bayt Al-Maqdis: Jerusalem and Early Islam* (Oxford, 1999), vol. 2, 113–82 and 184–90.
77. For such reuse at Petra see F. Marii, 'Glass tesserae from the Petra Church', in eds. Entwistle and James, *New Light on Old Glass*, 11–24; also Flood, *The Great Mosque*, 24 and n.48 (though there is no evidence to support his idea that reused tesserae were seen as inferior by the Byzantines – who used them themselves). M. Greenhalgh, 'Islamic re-use of antique mosaic tesserae', *Journal of Mosaic Research* 1–2 (2008), 55–81, brings a great deal of material together.
78. J. L. Bacharach, 'Marwanid building activities: speculations on patronage', *Muqarnas* 13 (1996), 34 and n.52; Ibn al-Shina, *Les perles choisés d'Ibn ach-Chihna*, tr. J. Sauvaget (Beirut, 1933), 57.
79. M. Piccirillo, 'The Umayyad churches of Jordan', *Annual of the Department of Antiquities of Jordan* 28 (1984), 333–41. A. Michel, *Les églises d'époque byzantine et umayyade de la Jordanie V–VIII siècle* (Turnhout, 2001), records twelve with wall mosaic. See 41 for her comments on the use of mosaic. In A. Ovadiah, *Corpus of the Byzantine Churches in the Holy Land* (Bonn, 1970), 181 sites are recorded, several with more than one church; 197 churches are recorded with decoration, of which 135 have mosaic (both floor and wall – the author is not always specific), 9 have marble facing, 7 wall painting, 7 coloured plaster. At 206, Ovadiah asserts that 'A few churches, especially the largest and most splendid, are almost invariably decorated with wall mosaic.' For Saqqara, see McKenzie, *Architecture of Alexandria and Egypt*, 642. For Resafa, Creswell, *Early Muslim Architecture*, vol. 1, 122–3.
80. R. Schick, 'Mosaics during the Byzantine and early Islamic periods', in ed. H. C. Evans with B. Ratliff, *Byzantium and Islam: Age of Transition, 7th–9th Century* (New York, 2012), 98–101 (on floor mosaics); Khamis, 'Two wall mosaic inscriptions'.
81. Khamis, 'Two wall mosaic inscriptions'.
82. *Ibid.* 170.
83. P. Carber and F. Morin, 'Archaeological researches at Qastal, second mission 1985', *Annual of the Department of Antiquities of Jordan* 31 (1987), 221–46; also Flood, *The Great Mosque*, 149. Also forthcoming is M. Verità and P. Santopadre, 'Scientific investigation of glass mosaic tesserae from the 8th century AD archaeological site of Qusayr' Amra (Jordan)': I am grateful to Marco Verità for sending me a draft of this article.
84. Flood, *The Great Mosque*, 217–19.
85. P. Baker, 'Glass in early Islamic palaces. The new age of Solomon', in *Annales du 16e Congrès de l'Association internationale pour l'histoire du verre* (Nottingham, 2005), 167–70.
86. Piccirillo, 'Umayyad churches of Jordan', and M. Piccirillo, 'Les mosaïques d'époque omeyyade des églises de la Jordanie', *Syria* 75 (1998), 263–78.
87. As Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', and E. Diez, 'The mosaics of the Dome of the Rock at Jerusalem', *Ars Islamica* 1 (1934), 235–8, both argued.
88. See Bacharach, 'Marwanid building activities', who also makes an interesting point about Damascus as capital city.
89. Mackenzie, 'Alexandria on the Barada'. Van Lohuizen-Mulder, 'The mosaics in the Great Mosque', also likes the idea of mosaicists from Alexandria.
90. B. Snelders, *Identity and Christian–Muslim Interaction: Medieval Art of the Syrian Orthodox from the Mosul Area* (Leuven, 2010); B. ter Haar Romeney, 'Ethnicity, ethnogenesis and the identity of Syrian Orthodox Christians', in W. Pohl, C. Gantne and R. Payne, *Visions of Community in the Post-Roman World: The West, Byzantium and the Islamic World, 300–1100* (Farnham, 2012), 183–204, esp. 201.
91. Gibb, 'Arab–Byzantine relations', 230–1, and Flood, *The Great Mosque*, 22–3. D. Jacoby, 'Byzantine trade with Egypt from the mid-10th century to the 4th Crusade', *Thesaurismata* 30 (2000), 25–77, esp. 10–13.
92. Flood, *The Great Mosque*.
93. Grafman and Rosen-Ayalon, 'Two great Syrian Umayyad mosques'. Creswell, *Early Muslim Architecture*, vol. 1, 101–31 and 156–96, discussing influences on both the Dome of the Rock and the Great Mosque, saw them as the work of local craftsmen working on several levels, but above all influenced by Christian examples in Syria. Flood, *The Great Mosque*, 20 and n.29, and 24, suggests that there were a small number of Byzantine artists working with local craftsmen.
94. For the medium as the message see I. Bierman, *Writing Signs: The Fatimid Public Text* (Berkeley, 1998), 44–5. In this context, there may also have been a sense of mosaics as reflecting a perception of mosaic as a Christian, and perhaps specifically Byzantine, medium.
95. Schick, 'Mosaics during the Byzantine and early Islamic periods'; Flood, 'Faith, religion and the material culture of early Islam', provides a useful introduction. Also the important article by S. H. Griffith, 'Byzantium and the Christians in the world of Islam: Constantinople and the church in the Holy Land in the ninth century', *Medieval Encounters* 3 (1997), 231–65.
96. On this and for a challenge to Constantinople's presumed primacy in other fields and the case for Syriac supremacy, see S. H. Griffith, 'John of Damascus and the church in Syria in the Umayyad era: the intellectual and cultural milieu of Orthodox Christians in the world of Islam', *Hugoye: Journal of Syriac Studies* 11 (2011), 207–37, which sets John of Damascus into

his Arab context, suggesting that he wrote as a Melkite for Melkites in response to the Arabs and also to Muslim iconoclasm. Griffith argues that the Levant in this period was a centre of culture at a time when relatively little material was being produced in Constantinople, and that the writers in the Levant were the most prominent Greek authors of their day. So why not also a milieu for art?

97. Great Mosque at Samarra: Creswell, *Early Muslim Architecture*, vol. 2 (first edition, Oxford, 1940), 258–9.
98. M. F. Hendy, *Studies in the Byzantine Monetary Economy, c. 300–1450* (Cambridge, 1985), 619 on.
99. L. Brubaker and J. Haldon, *Byzantium in the Iconoclast Era c. 680–850: A History* (Cambridge, 2011).
100. See the discussion of R. S. Cormack, 'Looking for iconophobia and Iconoclasm in Late Antique Byzantium', in ed. N. N. May, *Iconoclasm and Text: Destruction in the Ancient Near East and Beyond* (Chicago, 2012), 471–84.
101. T. Velmans, 'Les mosaïques pariétales en Georgie et les problèmes qu'elles posent', in *Mosaïque: recueil d'hommages à Henri Stern* (Paris, 1983), 337–44; Z. Skhirtladze, 'À propos du décor absidal de C'romi', *Revue des études georgiennes et caucasiennes* 6–7 (1990–91), 163–83.
102. *Patria* 2, 35.
103. Blachernae: *Vita St Stephen Iunioris*, ch. 29, *La vie d'Etienne le Jeune par Etienne le Diacre*, ed. and tr. M.-F. Auzépy (Aldershot, 1997), 126–7 and 221–2. Constantine V also replaced images of the Church Councils located at the Milion, but we are not told whether these were in paint or mosaic nor what replaced them: *Vita St Stephen Iunioris*, ch. 65, *La vie d'Etienne*, 166–7 and 264–5. Pege: *De sacris aedibus Deiparae ad Fontem*, in C. Mango, *Art of the Byzantine Empire: Sources and Documents* (Toronto, 1974), 156–7.
104. Nikephoros, *Breviarium historicum*, 86; text, tr. and commentary by C. Mango, *Short History: Nikephoros, Patriarch of Constantinople* (Washington, DC, 1990), 160–3; *Patria* 3, 20.
105. H. Zidkov, 'Ein Wandmosaikfragment aus Konstantinopel', *Byzantinische Zeitschrift* 30 (1929–30), 601–7 and plate XI, discussed a very mangy fragment of mosaic said to be from the area of the Gül Camii and associated with the church of St Nicholas. He dated it, on style grounds, to the seventh century. P. J. Nordhagen, 'The mosaics of John VII (705–707AD). The mosaic fragments and their techniques', *ActaNorv* 2 (1965), 121–66, at 159–60 and pl. 26, sees the piece, which he says is now in the Church of St Nicholas in Istanbul, as having some similarities with the mosaics of the oratory of John VII. I have never seen it and have not been able to trace it, and the illustration in the article is very unclear.
106. W. S. George, *The Church of Saint Eirene at Constantinople* (Oxford, 1912); the brief summary and notes in L. Brubaker and J. Haldon, *Byzantium in the Iconoclast Era c. 680–850: The Sources: An Annotated Survey* (Aldershot, 2001), 6–8 and 19–20.
107. Now there are no traces of mosaic there or on the other large vaults, pendentives or dome. A. Taddei, 'Remarks on the decorative wall mosaics of St Eirene at Constantinople', in ed. M. Şahin, *Eleventh International Colloquium on Ancient Mosaics 2009* (Istanbul, 2011), 883–96, looks at the mosaics in the context of sixth-century mosaics in Hagia Sophia.
108. See George, *Hagia Eirene*, 50, who translates it as 'He who buildeth his ascent up to the heaven and foundeth his promise/vault upon the earth, the Lord Almighty is his name.'
109. *Ibid.* 51: '[Come we will go?] in the good things of thy house. Holy is thy temple. Thou art wonderful in righteousness. Hear us, o God our Saviour; the hope of all the ends of the earth and of all them that are afar upon the sea.' Both texts in Hagia Eirene are similar to the collect used in the Orthodox Church today for the consecration of a building.
110. R. Cormack and E. J. W. Hawkins, 'The mosaics of St. Sophia at Istanbul: the rooms above the southwest vestibule and ramp', *DOP* 31 (1977), 177–251; Brubaker and Haldon, *Byzantium in the Iconoclast Era: Sources*, 20–1.
111. O. Wulff, *Die Koimesiskirche in Nikaia und ihre Mosaiken* (Strasburg, 1903); F. Schmitt, *Die Koimesis-Kirche von Nikaia: Das Bauwerk und die Mosaiken* (Berlin, 1927); P. A. Underwood, 'The evidence of restorations in the sanctuary mosaics of the church of the Dormition at Nicaea', *DOP* 13 (1959), 235–43. Brubaker and Haldon, *Byzantium in the Iconoclast Era: Sources*, 10–11, 21–3.
112. Brubaker and Haldon, *Byzantium in the Iconoclast Era: Sources*, 23.
113. Though quite when to date them is hotly debated: see R. Cormack, 'The mosaic decoration of S. Demetrios, Thessaloniki: a re-examination in the light of the drawings of W. S. George', *Annual of the British School of Athens* 64 (1969), 17–52, plus his Additional Notes and Comments in *The Byzantine Eye* (London, 1989); eds. Bakirtzis et al., *Mosaics of Thessaloniki*, 148–58; A. Mentzos, *Ta psephidota tēs anoikodomēsēs tou naou tou Agiou Demetriou ston 7 aiona AD* (Thessaloniki, 2010); B. Fourlas, *Die Mosaiken der Acheiropoietos-Basilika in Thessaloniki: eine vergleichende Analyse dekorativer Mosaiken des 5. und 6. Jahrhunderts* (Berlin, 2012). A. Antonaras, 'Gold-glass tile decoration in the St Demetrios basilica, Thessaloniki', in eds. A. Antonaras and D. Ignatiou, *Annales du 18e Congrès de l'Association internationale pour l'histoire du verre* (Thessaloniki, 2012), 301–6, also discusses the use of gold glass insets in the arches of the west doors into the nave, dating them to the seventh century.
114. This has been dated to almost any period both pre-620 and as late as the ninth century.
115. The inscription below is damaged, and if there was a name there it is lost. Brubaker, 'Elites', dates it to the seventh century; J. C. Anderson, 'A note on the sanctuary mosaics of S. Demetrius, Thessalonike', *CahArch* 4 (1999), 55–65, argues for a ninth-century date.

116. B. Fourlas, '*Ktistas Theoreis*. Wer ist der civile Würdenträger auf dem Stiftermosaik in der Demetrioskirche in Thessaloniki?', *Byzantine Symmeikta* 20 (2010), 195–244, argues this figure is not Leontios the praetorian prefect of Illyricum and possible founder of the church but a contemporary donor of the mid-seventh century who contributed to the rebuilding of the church after the fire damage of *c.* 620/30.
117. R. Cormack, *Writing in Gold* (London, 1985), 91, sees this scene as post-620.
118. *Ibid.* 60. For the *Miracles*, see P. Lemerle, *Les plus anciens recueils des miracles de saint Demetrius* (Paris, 1979–81), vol. 1, *Texte* and vol. 2, *Commentaire*.
119. Eds. Bakirtzis et al., *Mosaics of Thessaloniki*, 143.
120. Brubaker, 'Elites'.
121. This is recorded in the *Miracles*, vol. 1, ch. 1.
122. Cormack, *Writing in Gold*, ch. 2, 50–94.
123. For its date and debates around the date, see R. Cormack, 'The apse mosaics of St. Sophia at Thessaloniki', *Deltion tes Christianikes Archaiologikes Etaireias* 10 (1980–81), 111–35, and his comments on the debates around the date of the architecture in the 'Additional notes and comments' to Study V in his *Byzantine Eye*. Also ed. Bakitzis, *Mosaics of Thessaloniki*, 241–95, and Brubaker and Haldon, *Byzantium in the Iconoclast Era: Sources*, 22–3.
124. Cormack, 'The apse mosaics of St. Sophia'; Brubaker and Haldon, *Byzantium in the Iconoclast Era: Sources*, 22–3.
125. A. Christidou, 'Political "expedience" and peripheral saints: assimilating St. Asteios of Dyrrachion in the Byzantine Orthodox tradition', *Byzantine and Modern Greek Studies* 38 (2014), 141–67.
126. Cormack, *Writing in Gold*, 84–5; K. Bowes and J. Mitchell, 'The main chapel of the Durrës amphitheatre', *Mélanges d'archéologie et d'histoire de l'École française de Rome, antiquité* 121.2 (2009), 571–97.
127. M. Andoloro, 'I mosaici parietali di Durazzo o dell'origine Costantinopolitana del tema iconografico di Maria Regina', in eds. O. Feld and U. Peschlow, *Studien zur spätantiken und byzantinischen Kunst: Friedrich Wilhelm Deichmann gewidmet* (Bonn, 1986), vol. 3, 103–12.
128. For a recent study pulling the bibliography together, see M. Lidova, 'The earliest images of Maria Regina in Rome and Byzantine imperial iconography', in *Niš and Byzantium: The Collection of Scientific Works*, vol. 8 (Niš, 2010), 231–43.
129. P. J. Nordhagen, 'The mosaics of John VII (705–707 AD): the mosaic fragments and their technique', *ActaNorv* 2 (1965), 121–66.
130. As Bowes and Mitchell, 'The main chapel', suggest.
131. Cormack, *Writing in Gold*, makes the case for a sixth-century date.
132. Bowes and Mitchell, 'The main chapel'. N. Thierry, 'Une mosaīque a Dyrrachium', *CahArch* 18 (1968), 227–9, offers no date; A. Ducellier, *La façade maritime de l'Albanie au moyen âge: Durazzo et Valona du XIe au XVe siècle* (Thessaloniki, 1981), 33, suggests the tenth century. The mosaic is discussed here because I adopted the rule of thumb that undated mosaics would appear in the chapter that dealt with their earliest ascribed date.
133. Christidou, 'Political "expedience"', suggests a Middle Byzantine date and a deliberate recreation of the Late Antique Christian past on the part of the patrons.
134. T. S. Brown, 'The church of Ravenna and the imperial administration in the seventh century', *English Historical Review* 94 (1979), 1–28.
135. See the summary in D. M. Deliyannis, *Ravenna in Late Antiquity* (Cambridge, 2010), 266 and 270–4 and also n.306 on 389.
136. Details in *ibid.* 272.
137. Brubaker, 'Elites'.
138. T. F. X. Noble, *The Republic of St Peter* (Philadelphia, 1984); P. Delogu, 'The papacy, Rome and the wider world in the seventh and eighth centuries', in ed. J. Smith, *Early Medieval Rome and the Christian West: Essays in Honour of Donald A. Bullough* (Leiden, 2000), 197–220, arguing that in the seventh century Rome was a city of empire and that the popes saw the whole sphere of empire as their sphere of influence.
139. See the arguments of Noble, *The Republic of St Peter*; J. Osborne, 'Rome and Constantinople in the ninth century', in eds. C. Bolgia, R. McKitterick and J. Osborne, *Rome across Time and Space* (Cambridge, 2011), 222–36; V. Pace, 'Immagini sacre a Roma fra VI e VII secolo. In margine al problemo "Roma e Bisanzio"', *ActaNorv* 18 (2004), 139–56. For a different view, P. Llewellyn, 'The popes and the constitution in the eighth century', *English Historical Review* 101 (1986), 42–67.
140. See the important points made in T. F. X. Noble, 'Topography, celebration and power: the making of a papal Rome in the eighth and ninth centuries', in eds. M. de Jong and F. Theuws, *Topographies of Power in the Early Middle Ages* (Leiden, 2001), 45–91.
141. I noted earlier with some scepticism how it has been argued that the triumphal arch of SS. Cosmas and Damian should be dated to the seventh century.
142. C. Bolgia, 'Il mosaic absidale di San Teodoro a Roma: problem storici e restauri attraverso disegni e documenti inediti', *Papers of the British School at Rome* 69 (2001), 317–51.
143. According to H. Brandenburg, *Ancient Churches of Rome* (Turnhout, 2005), 248, though this doesn't tell us how we know!
144. Andaloro/Romano A1, 67–76; Brandenburg, *Ancient Churches*, 241. For S. Agnese, also see P. J. Nordhagen, 'Early medieval church decoration in Rome and the "battle of images"', in eds. F. Guidobaldi and A. G. Guidobaldi, *Ecclesiae Urbis: Atti del Congresso internazionale di studi sulle chiese di Roma (IV–X secolo)* (Vatican City, 2002), vol. 3, 1749–62, at 1760–1 on whether the papal head has been restored.
145. *LP*, Severinus.
146. G. Mackie, 'The San Venanzio chapel in Rome and the martyr shrine sequence', *RACAR* 23 (1996), 1–13; G. Mackie, *Early Christian Chapels in the West: Decoration,*

Function and Patronage (Toronto, 2003), 212–30; Brandenburg, *Ancient Churches*, 53–4.

147. Andaloro/Romano A1, 319–24; Brandenburg, *Ancient Churches*, 200–13; C. Davis-Weyer, 'S. Stefano Rotondo in Rome and the Oratory of Theodore I', in ed. W. Tronzo, *Italian Church Decoration of the Middle Ages and Early Renaissance* (Bologna, 1989), 61–80; G. Basile et al., 'Il restauro del mosaico di S. Stefano Rotondo a Roma', *Arte medievale* 7 (1993), 197–228.

148. *LP*, Theodore. R. Krautheimer, 'Santo Stefano Rotondo a Roma e la Chiesa del Santo Sepolcro a Gerusalemme', *Rivista di archeologia cristiana* 12 (1935), 51–102, and tr. as 'St Stefano in Rome and the Rotunda of the Holy Sepulchre in Jerusalem', in R. Krautheimer, *Studies in Early Christian, Medieval and Renaissance Art* (New York, 1969), 69–106; Brandenburg, *Ancient Churches*, 200–13.

149. See A. Thacker, 'Rome of the martyrs: saints, cults, relics, fourth to seventh centuries', in eds. É. Ó Carragáin and C. Neuman de Vegvar, *Roma Felix: Formation and Reflections of Medieval Rome* (Aldershot, 2007), 13–50; C. J. Goodson, 'Building for bodies: the architecture of saint veneration', in *ibid.* 51–80. E. Thunø, *Image and Relic: Mediating the Sacred in Early Medieval Rome* (Rome, 2002), discusses the expansion of the cult of relics.

150. S. Pasi, 'Nota sulla cosidetta icona musiva conservata nella chiesa di S Pietro in Vincoli a Roma', in ed. R. Ling, *Fifth International Colloquium on Ancient Mosaics Held at Bath, 1987*, vol. 2 (Portsmouth, RI, 1995), 245–50; R. Flaminio, 'Il mosaici di San Sebastiano nella chiesa di San Pietro in Vincoli a Roma', in eds. F. Guidobaldi and A Paribeni, *AISCOM* 6 (Ravenna, 2000), 425–38. The panel as it survives is 150 × 70 cm.

151. According to Paul the Deacon, *History of the Lombards*, 6, 5 (ed. L. Capo, *Paolo Diacono, Storia dei Longobardi* (Rome, 1992), 312–13), an altar of S. Sebastian containing a relic of the saint in the church of S. Pietro *in Vincoli* saved the city from the plague. W. Oakeshott, *The Mosaics of Rome: From the Third to the Fourteenth Centuries* (London, 1967), 154. There is a tradition that the panel came from a church on the Esquiline. It was certainly in S. Pietro *in Vincoli* by the seventeenth century.

152. The current church is largely seventeenth century, so is it possible that the mosaic came from the earlier church?

153. Discussed in P. Liverani, 'Saint Peter's, Leo the Great and the leprosy of Constantine', *Papers of the British School at Rome* 76 (2008), 155–72.

154. S. Waetzold, *Die Kopien des 17 Jahrhunderts nach Mosaiken und Wandmalerei in Rom* (Munich, 1964), 65 cat. 847 and pl. 463.

155. Nordhagen, 'The mosaics of John VII', discusses the surviving fragments which show: part of a portrait of John himself; the head and shoulders of Christ from the Entry into Jerusalem; the nurse and child from the Nativity; a fragment of a mourning Virgin from the Crucifixion (all in the Vatican Grottoes); parts of the Virgin and Longinus the centurion (in the Scuola dei Musaico in the Vatican); the Adoration of the Magi now in S. Maria in Cosmedin; a part of the Virgin from the Nativity in the cathedral at Orte; an over life-size Maria Regina in S. Marco in Florence. A fragment showing Peter now in the Vatican Grottoes may have been from the Oratory but has been horribly reset. Other fragments – of the Nativity, the raising of Lazarus and the Crucifixion – have been lost. Also see A. van Dijk, 'Jerusalem, Antioch, Rome and Constantinople: the Peter cycle in the Oratory of Pope John VII (705–707)', *DOP* 55 (2001), 305–28; J. D. Breckenridge, 'Evidence for the nature of relations between Pope John VII and the Byzantine Emperor Justin II', *Byzantinisches Zeitschrift* 65 (1972), 364–74; P. J. Nordhagen, 'Working with Wilpert. The illustrations in *Die römische Mosaiken und Malereien* and their source value', *ActaNorv* 5 (1985), 247–57; A. van Dijk, 'Reading medieval mosaics in the seventeenth century: the preserved fragments from Pope John VII's oratory in Old St Peter's', *Word and Image* 22 (2006), 285–91.

156. W. Tronzo, 'Setting and structure in two Roman wall decorations of the Early Middle Ages', *DOP* 41 (1987), 477–92, sees them as twelfth century; van Dijk, 'Jerusalem, Antioch', as eighth. Also see A. Ballardini and P. Pogliani, 'A reconstruction of the oratory of John VII (705–7)', in eds. R. McKitterick, J. Osborne, C. M. Richardson and J. Story, *Old Saint Peter's, Rome* (Cambridge, 2013), 190–213.

157. Thunø, *Image and Relic*; also see ideas in Tronzo, 'Setting and structure'.

158. *LP*, Zaccharias. G. Massimo, 'Papa Zaccaria e i lavori di rinnovamento del Patriarchio Lateranense (741–752)', *Arte medievale* 2 (2003), 17–37; J. Osborne, 'Papal court culture during the pontificate of Zacharias (AD 741–52)', in ed. C. Cubitt, *Court Culture in the Early Middle Ages* (Leuven, 2003), 223–34. Zacharias has been seen as a pro-Constantinopolitan pope and his building work consequently as reflecting a dialogue with the Great Palace in Constantinople. It is possible, but not necessarily necessary and unlikely to be the whole story as (in my view) papal building in Rome was about Rome first and foremost.

159. S. Maria Maggiore: C. Bertelli, 'Un antico restauro di Santa Maria Maggiore', *Paragone* 63 (1955), 40–2; S. Spain, 'Carolingian restoration of the mosaics of S. Maria Maggiore in Rome', *Gesta* 16 (1977), 13–22; P. J. Nordhagen, 'The archaeology of wall mosaics: a note on the mosaics of Sta. Maria Maggiore in Rome', *Art Bulletin* 65 (1983), 323–4; S. Spain, 'The restoration of the Sta. Maria Maggiore mosaics', *Art Bulletin* 65 (1983), 325–8. S. Pudenziana: Waetzold, *Die Kopien*, 73.

160. Noble, 'Topography, celebration and power'.

161. See *LP* under the names of these popes, and also Noble, 'Topography, celebration and power', 58–9.

162. See the excellent debunking article by T. F. X. Noble, 'Greek popes: yes or no, and did it matter?', in eds. A. Fischer and I. Wood, *Western Perspectives on the Mediterranean: Cultural Transfer in Late Antiquity and*

the Early Middle Ages, 400–800 AD (London, 2014), 77–86. The influence of this article on the next few paragraphs will be obvious.

163. P. Llewellyn, 'The popes and the constitution in the eighth century', *English Historical Review* 101 (1986), 42–67; also see Noble, *The Republic of St Peter*, 185–6.
164. C. Gantner, 'The label "Greeks" in the papal diplomatic repertoire in the eighth century', in eds. W. Pohl and G. Heydermann, *Strategies of Identification: Ethnicity and Religion in Early Medieval Europe* (Turnhout, 2013), 303–49.
165. See Llewellyn, 'The popes and the constitution', who nonetheless sees a closer relationship with Byzantium than the one I have sketched out here.
166. Nordhagen, 'John VII'.
167. Brandenburg, *Ancient Churches*, 240–7. At 247, he suggests that 'there are worlds separating this artwork from the mosaic of SS. Cosmas and Damian which is still attached to the artistic feel and perception of Antiquity'; the mosaic of S. Agnese 'took the decisive step from Antiquity to the Middle Ages'. As you can imagine, this seems unhelpful to me.
168. D. Manacorda, *Crypta Balbi: archeologia e storia di un paessagio urbano* (Milan, 2001); P. Mirti, A. Lepora and L. Saguì, 'Scientific analysis of seventh-century glass fragments from the Crypta Balbi in Rome', *Archaeometry* 42 (2000), 359–74; P. Mirti, P. Davit, M. Gulmini and L. Saguì, 'Glass fragments from the Crypta Balbi in Rome: the composition of eighth-century fragments', *Archaeometry* 43 (2001), 491–502.
169. Osborne, 'Rome and Constantinople in the ninth century'. Pace, 'Immagini sacre a Roma', makes the point that each case needs to be taken on its merits: there may be elements derived from Byzantium in, perhaps, the growth of the cult of Mary, but the mosaics of SS. Cosmas and Damian, S. Lorenzo *fuori le mura* and S. Agata are really Roman and about Rome.

9 MEDIUM AND MESSAGE

1. H. E. Del Medico, 'La mosaïque de l'abside orientale à Germigny-des-Prés', *Monuments et mémoires: Académie des inscriptions et belles-lettres* 39 (1943), 81–102; A. Grabar, 'Les mosaïques de Germigny-des-Prés', *CahArch* 7 (1954), 171–83; A. O. Poilpré, 'Le décor de l'oratoire de Germigny-des-Prés: l'authentique et le restauré', *Cahiers de civilisation médiévale* 41 (1998), 281–97, especially on the question of restorations and extent of mosaics; A. Freeman and P. Meyvaert, 'The meaning of Theodulf's apse mosaic at Germigny-des-Prés', *Gesta* 40 (2001), 125–39; G. Mackie, 'Theodulf of Orleans and the Ark of the Covenant: a new allegorical interpretation of Germigny-des-Prés', *RACAR* 32 (2007), 45–58.
2. Freeman and Meyvaert, 'The meaning of Theodulf's apse mosaic' (from whom the translation of the prayer), suggest it was empty; Mackie, 'Theodulf of Orleans', hypothesises as to its possible contents.
3. Theodulf, *Opus Caroli regis contra synodum: (Libri Carolini)*, ed. A. Freeman (Hanover, 1998); A. Freeman, *Theodulf of Orléans: Charlemagne's Spokesman against the Second Council of Nicaea* (Aldershot, 2003); T. F. X. Noble, *Images, Iconoclasm, and the Carolingians* (Philadelphia, 2009).
4. There may also have been a mosaic (if it was a mosaic) made at the same time for Theodulf's villa, depicting personifications of the seven liberal arts on branches of a tree: Freeman and Meyvaert, 'The meaning of Theodulf's apse mosaic'; A. C. Esmeijer, 'De VII liberalibus artibus in quadam picture depictis. Een reconstructie van de arbour philosophiae van Theodulf van Orleans', in ed. J. Bruyn et al., *Album Amicorum J. G. Van Gelder* (The Hague, 1973), 102–13.
5. Freeman and Meyvaert, 'The meaning of Theodulf's apse mosaic', argued for an empty Ark prefiguring the Eucharist located below it. Mackie, 'Theodulf of Orleans', wanted the Ark to be an aniconic representation of Mary and made the case for an association with the Visigothic mosaics of La Daurade. I. Foletti, 'Germigny-des-Prés, il Santo Sepulcro e la Gerusalemme Celeste', *Convivium* 1 (2014), 32–49, suggests that the whole building can be interpreted as evoking the death and resurrection of Christ.
6. Einhard, *Life of Charlemagne*, ch. 17 (eds. G. H. Pertz and G. Waitz, *Einhardi Vita Karoli Magni*, Monumenta Germaniae historica, *Scriptores rerum germanicarum* 25 (Hanover, 1911)), on building at Aachen. The nineteenth-century mosaics in the chapel are felt to copy the Frankish ones: the iconography of the Lamb of God, the evangelist symbols and the twenty-four Elders is close enough to mosaics from Rome to make this plausible. In U. Wehling, *Die Mosaiken im Aachener Münster und ihre Vorstufen* (Cologne and Bonn, 1995), the analyses of tesserae (140 and discussion at 21–2) are too brief to be informative but hint at the possibility of different compositional characteristics between tesserae from Aachen and Ravenna, an issue that could bear thorough investigation. Grabar, 'Les mosaïques', 174, suggests that there was a wall mosaic at Gorze in Lorraine dating to 765.
7. K. M. Wedepohl, 'The composition of Carolingian glass in Europe', in ed. H. E. M. Cool, *Annales du 16e Congrès de l'Association internationale pour l'histoire du verre, London 2003* (Nottingham, 2005), 203–6.
8. W. E. Kleinbauer, 'Charlemagne's palace chapel at Aachen and its copies', *Gesta* 4 (1965), 2–11. J. J. Emerich, 'Building *more Romano* in Francia during the third quarter of the eighth century: the abbey church of St-Denis and its model', in eds. C. Bolgia, R. McKitterick and J. Osborne, *Rome across Time and Space* (Cambridge, 2011), 127–50, argues that Aachen looked to Ravenna if anything, not Rome. In this context, it is important to consider how a sixth-century church might have appeared to an eighth-century audience.

9. See eds. C. Bertelli and G. P. Broglio, *Il futuro dei Longobardi: l'Italia e la costruzione dell'Europa di Carlo Magno* (Milan, 2000), cat. entry 371 at p. 388 and illustrations 253–6 at pp. 384–5. Also C. Bertelli, 'Mosaici a Milano', *Atti del 10 Congresso internazionale di studi sull'alto medioevo* (Spoleto, 1986), 333–51; Bertelli, 'Sant'Ambrogio da Angilberto II a Gotofredo', in *Il millennio ambrosiano* (Milan, 1987), 16–81.
10. Del Medico, 'La mosaīque', says that in 1889 Abbé Prevost claimed that tesserae were made on site because what appeared to be glass-working debris was found in the garden. He believed in Byzantine mosaicists; Grabar, 'Les mosaïques', 178–9, suggested that the mosaicists could have been Byzantine or Roman, and saw links with Islamic work. He noted that the mosaicists used fragments of polychrome marble and mother-of-pearl more often than the usual cubes of mosaic, especially in the ornaments of the border. This is contrary to Byzantine practice but would sit well with Italian work, especially on floor mosaics; it might also reflect a shortage of materials.
11. Hadrian's letter: *Codex Carolinus*, letter 81; Monumenta Germaniae historica, *Epistolae Merowingici et Karolini aevi*, vol. 1, 614. Also see Einhard, *Life of Charlemagne*, ch. 26, which claims that Charlemagne brought marble columns from Rome and Ravenna for he could not find them anywhere else.
12. *Gesta Treverorum* of 1166, cited by Wehling, *Die Mosaiken im Aachener Münster*, 12.
13. By Del Medico, 'La mosaīque'. Notker's *Life of Charlemagne*, ch. 28 (ed. H. F. Haefele, *Gesta Karoli Magni Imperatoris*, Monumenta Germaniae historica, *Scriptores rerum germanicarum* NS 12 (Berlin, 1959)) says that Charlemagne wanted to have his own cathedral finer than the ancient buildings of the Romans. To help, he summoned architects and workmen 'from all the lands beyond the seas'. Placed in charge of them was a certain abbot who was most experienced in this sort of work but had fraudulent habits. This man took bribes and let men go home if they paid him: he died in a fire as a punishment from God.
14. For S. Vincenzo, see ed. R. Hodges, *S. Vincenzo al Volturno*, vols. 1 and 2 (Rome, 1993 and 1995); N. Schibille and I. C. Freestone, 'Composition, production and procurement of glass at San Vincenzo al Volturno: an early medieval monastic complex in Italy', *PLoS ONE*, 16 October 2013; http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0076479.
15. M. Newby, 'Medieval glass from Farfa', in *Annales du 10 Congrès de l'Association international pour l'histoire du verre* (Amsterdam, 1987), 255–70.
16. R. Krautheimer, *Rome: Profile of a City, 312–1308* (Princeton, 1980), 126; P. J. Nordhagen, 'The archaeology of wall mosaics: a note on the mosaics of Sta. Maria Maggiore in Rome', *Art Bulletin* 65 (1983), 324.
17. See the discussions in M. McCormick, *Origins of the European Economy: Communications and Commerce AD 300–900* (Cambridge, 2001).
18. Andaloro/Romano A1, 217–24 for the Triclinium and Aula; *LP*, Leo III. On triclinia, see I. Lavin, 'The House of the Lord: aspects of the role of palace triclinia in the architecture of Late Antiquity and the Early Middle Ages', *Art Bulletin* 44 (1962), 1–27, esp. 12 on this one. More specifically, H. Belting, 'I mosaici dell'aula Leonina come testimonianza della prima "renovation" nell'arte medievale a Roma', in *Roma e l'età Carolinga* (Rome, 1976), 167–83; H. Belting, 'Die beiden Palastaulen Leos III. und die Entstehung einer *päpstlichen* Programmkunst', *Frühmittelalterliche Studien* 12 (1978), 55–83; M. Luchterhand, 'Famulus Petri, Karl der Grosse in den römischen Mosaikbildern Leos III', in eds. C. Stiegemann and M. Wemhoff, *799: Kunst und Kultur der Karolingerzeit, Karl der Grosse und Papst Leo III* (Mainz, 1999), vol. 3, 55–70; C. Davis-Weyer, 'Die Mosaiken Leos III. und die Anfänge der karolingischen Renaissance in Rom', *Zeitschrift für Kunstgeschichte* 29 (1966), 111–32; C. Davis-Weyer, 'Karolingisches und Nichtkarolingisches in zwei Mosaikfragmenten der Vatikanischen Bibliothek', *Zeitschrift für Kunstgeschichte* 37 (1974), 31–9; G. Ladner, 'I mosaici e gli affreschi ecclesiastico-politici nell'antico Palazzo Lateranense', *Rivista di archeologia cristiana* 12 (1935), 265–92; C. Walter, 'Papal political imagery in the medieval Lateran palace' [part 1], *CahArch* 20 (1970), 155–76. Another large triclinium, also mosaicked, was built near St Peter's by Leo: H. Belting, 'Papal artistic commissions as definitions of the medieval church in Rome', in eds. H. Hagar and S. S. Munshower, *Light on the Eternal City* (Philadelphia, 1987), 13–21.
19. F. Alto Bauer, *Das Bild der Stadt Rom im Frühmittelalter: Papstiftungen im Spiegel des Liber Pontificalis von Gregor dem Dritten bis zu Leo dem Dritten* (Wiesbaden, 2004).
20. See the discussion in T. F. X. Noble, *The Republic of St. Peter: The Birth of the Papal State, 680–825* (Philadelphia, 1984), 323–4.
21. *Greek Anthology* 1, 106; discussed in L. Brubaker and J. Haldon, *Byzantium in the Iconoclast Era c. 680–850: The Sources: An Annotated Survey* (Aldershot, 2001), 304–6.
22. Belting, 'Die beiden Palastaulen Leos III' and 'I mosaici dell'aula leonine'.
23. See the excellent study of C. J. Goodson, *The Rome of Pope Paschal I: Papal Power, Urban Renovation, Church Rebuilding and Relic Translation, 817–824* (Cambridge, 2010), 20–1.
24. T. F. X. Noble, 'Topography, celebration and power: the making of a papal Rome in the eighth and ninth centuries', in eds. M. de Jong and F. Theuws, *Topographies of Power in the Early Middle Ages* (Leiden, 2001), 45–91. For Rome in this period, see C. J. Wickham, *Medieval Rome: Stability and Crisis of a City, 900–1150* (Oxford, 2015).
25. *LP*, Leo III. Noble, 'Topography, celebration and power', 55; also see the chart of papal gifts between 600 and 900 presented by P. Delogu, 'Oro e argente in Roma', in *Cultura e società nell'Italia medieval: studi per Paolo Brezzi* (Rome, 1988), vol. 1, 273–93, which also indicates that papal gifts of gold and silver did not necessarily

match up with papal building activity: John VII is low down the list whilst Leo IV was a big donor of precious metals but has left little record of building activity.

26. The rebuildings are summarised in A. Herz, 'Cardinal Cesare Baronio's restoration of SS. Nereo ed Achilleo and S. Cesareo de'Appia', *Art Bulletin* 70 (1988), 590–620.
27. S. Antellini, 'Il mosaico dell'arco absidale nella chiesa dei SS. Nereo e Achilleo a Roma', in eds A. M. Iannucci, C. Fiori and C. Muscolino, *Mosaici a S. Vitale e altri restauri: il restauro in situ di mosaici parietali* (Ravenna, 1992), 191–6; G. Curzi, 'La decorazione musiva della basilica dei SS. Nereo e Achilleo in Roma: materiali ed ipotesi', *Arte medievale* 7 (1993), 21–46. D. Giunta, 'I mosaici dell'arco absidale della Basilica dei SS. Nereo e Achilleo e l'eresia Adozionista del sec VIII', in *Roma e l'età Carolingia* (Rome, 1976), 195–200, suggested that these scenes illustrated the papal desire to counter the revival of Adoptionism in Visigothic Spain at the end of the eighth century.
28. *LP*, Leo III; Belting 'I mosaici dell'aula Leonina', 176.
29. Which is exactly what Goodson, *The Rome of Pope Paschal*, does. G. Matthiae, 'La cultura artistica in Roma nel secolo IX', *Rivista dell'Istituto nazionale d'archeologia e storia dell'arte* NS 3 (1954), 257–74.
30. W. Oakeshott, *The Mosaics of Rome: From the Third to the Fourteenth Centuries* (London, 1967), seems to do it by style; in contrast, Goodson, *The Rome of Pope Paschal*, adopts the order of the *LP*, Paschal I.
31. Andaloro/Romano A1, 295–306; Goodson, *The Rome of Pope Paschal*.
32. A lot of restoration makes it hard to be sure who the figures are (or were). Mary and Prassede have also been interpreted as Ecclesia and Synagoga: M. Mauck, 'The mosaic of the triumphal arch of S. Prassede: a liturgical interpretation', *Speculum* 62 (1984), 822.
33. Goodson, *The Rome of Pope Paschal*, 156; 235–41 on paintings in the church depicting the virtues of the saints.
34. Mauck, 'The mosaic of the triumphal arch'.
35. On the significance of square haloes see J. Osborne, 'The portrait of Pope Leo IV in San Clemente, Rome: a re-examination of the so-called "square" nimbus in medieval art', *Papers of the British School at Rome* 47 (1979), 58–65.
36. Goodson, *The Rome of Pope Paschal*, 165 and nn.8 and 9.
37. *Ibid.* 152 on the inscription.
38. *Ibid.* 121 on the lost mosaic on the arch at S. Cecilia.
39. *Ibid.* 192–3.
40. It has been restored. See E. Thunø, 'The cult of the Virgin. Icon and relic in Early Christian and medieval Rome. A semiotic approach and a sixth-century proposal', *ActaNorv* 17 (2003), 79–98.
41. E. Thunø, 'Materialising the invisible in early medieval art: the mosaic of Santa Maria in Domnica in Rome,' in eds. G. de Nie, K. F. Morrison and M. Mosteri, *Seeing the Invisible in Late Antiquity and the Early Middle Ages* (Turnhout, 2005), 265–90.
42. Goodson, *The Rome of Pope Paschal*, 6.
43. F. Alto Bauer, 'The liturgical arrangement of early medieval Roman church building', *Mededelingen van het Nederlands Institut te Rom* 59 (2000), 101–28. More widely, J. F Romano, *Liturgy and Society in Early Medieval Rome* (Aldershot, 2014).
44. T. F. X. Noble, *The Republic of St Peter* (Philadelphia, 1984), 214, says that *tituli* were originally meeting places for individual communities of worshippers; they were not evenly distributed but were in areas of dense population. Gradually they became almost parishes.
45. S. de Blaauw, *Cultus et decor: liturgia e architettura nella Roma tardoantica e medievale: Basilica Salvatoris, Sanctae Mariae, Sancti Petri* (Vatican, 1994), 180–1; Romano, *Liturgy and Society*, 29–33.
46. Goodson, *The Rome of Pope Paschal*.
47. J. J. Emerich, 'Focusing on the celebrant: the columns display inside S. Prassede', *Mededelingen van het Nederlands Institut te Rom* 59 (2000), 129–59, saw buildings as one of most effective of mass media – structures were used to shape behaviours of others and claim political power and social positions.
48. E. Thunø, *Image and Relic: Mediating the Sacred in Early Medieval Rome* (Rome, 2002).
49. Goodson, *The Rome of Pope Paschal*, 211.
50. *Ibid.* 144: surviving letters reveal a complex jockeying for position and authority amongst popes and kings and emperors.
51. *Ibid.* 218–23.
52. Argued in *ibid.*
53. *LP*, Gregory IV. C. Bolgia, 'The mosaics of Gregory IV at San Marco, Rome: papal response to Venice, Byzantium and the Carolingians', *Speculum* 81 (2006), 1–34. R. Krautheimer and S. Corbett, 'S. Marco', in R. Krautheimer et al., *Corpus Basilicarum Christianarum Romae: The Early Christian Basilicas of Rome (IV–IX Centuries)*, 5 vols. (Vatican City, 1937–77), vol. 2, 217–49.
54. G. Matthiae, *Mosaici medioevali delle chiese di Roma* (Rome, 1967), 243.
55. This is Bolgia's argument in 'Mosaics of Gregory IV'.
56. Bolgia, 'Mosaics of Gregory IV'.
57. *Ibid.*
58. *LP*, Gregory. P. Liverani, 'Saint Peter's, Leo the Great and the leprosy of Constantine', *Papers of the British School at Rome* 76 (2008), 155–72; at 161 and see nn.30–4 about debates whether this mosaic was on the façade of the church or the exterior of the courtyard.
59. This is Oakeshott, *The Mosaics of Rome*, 213.
60. C. Wickham, '"The Romans according to their malign customs": Rome in Italy in the late ninth and tenth centuries', in ed. J. Smith, *Early Medieval Rome and the Christian West: Essays in Honour of Donald A. Bullough* (Leiden, 2000), 151–67, pointing out that Rome was different from the rest of Italy in terms of a variety of factors, including its size, active urban life and bureaucratic continuity, and also its geopolitical and symbolic importance.

61. Y. Lev, 'A Mediterranean encounter: the Fatimids and Europe, tenth to twelfth centuries', in eds. R. Gertwagen and E. Jeffreys, *Shipping, Trade and Crusade in the Medieval Mediterranean: Studies in Honour of John Pryor* (Farnham, 2012), 131–56. C. Wickham, *Medieval Rome: Stability and Crisis of a City, 900–1150* (Oxford, 2015), for tenth- to twelfth-century Rome. Wickham is not keen on a papal grand narrative, but mosaics as papal commissions inevitably lead to one.
62. Andaloro/Romano A1, 253–68.
63. As the Introductions to the three volumes of Raymond Davis' translations of the *LP* make clear: *The Book of Pontiffs*, tr. with intro. by R. Davis (Liverpool, 1989, 1992 and 1995). One thing the *LP* does not explain is whether donations made to churches were in addition to what was already there or to replace what had gone missing, for whatever reasons.
64. R. Krautheimer, 'The Carolingian revival of Early Christian architecture', *Art Bulletin* 24 (1942), 1–38; also see R. Krautheimer, *Rome: Profile of a City* (Princeton, 1980). Emerich, 'Building *more Romano* in Francia', looks at it from the other end – what being like Rome might have meant to the Carolingians in their own lands.
65. Krautheimer, 'The Carolingian revival'.
66. Mauck, 'The mosaic of the triumphal arch of Sta Prassede', follows Krautheimer.
67. R. Coates-Stephens, 'Dark Age architecture in Rome', *Papers of the British School at Rome* 65 (1997), 177–232; Goodson, *The Rome of Pope Paschal*; N. Christie, 'Charlemagne and the renewal of Rome', in ed. J. Story, *Charlemagne: Empire and Society* (Manchester, 2005), 167–82; P. Delogu, 'The rebirth of Rome in the eighth and ninth centuries', in eds. R. Hodges and B. Hobley, *The Rebirth of Towns in the West, AD 700–1050* (London, 1988), 32–42.
68. Coates-Stephens, 'Dark Age architecture'; T. F. X. Noble, 'Paradoxes and possibilities in the sources for Roman society in the Early Middle Ages', in ed. Smith, *Early Medieval Rome*, 55–84.
69. Goodson, *The Rome of Pope Paschal*, 54; C. Goodson, 'Revival and reality: the Carolingian Renaissance in Rome and the basilica of Sta Prassede', *ActaNorv* 20 (2006), 163–92; P. Delogu, 'Rome in the ninth century: the economic system', in ed. J. Henning, *Post-Roman Towns, Trade and Settlement in Europe and Byzantium* (Berlin, 2007), 105–22; P. Delogu, 'L'importazione di tessuti preziosi e il sistema economico romano nel IX secolo', in ed. P. Delogu, *Roma medievale aggiornamenti* (Florence, 1998), 123–41.
70. Coates-Stephens, 'Dark Age architecture', provides a corpus of church building in the period and offers a vital corrective to the Krautheimer thesis. He concludes that there is no clear sign of decline and rebirth in numerical terms. Coates-Stephens also makes the important point at 180 that scholars are reliant on the *LP*, which is only about papal building and is not fully inclusive, even of papal building projects, and suggests that it is no accident that there is no *LP* for the tenth century when everyone claims there is no building in Rome.
71. Noble, 'Topography, celebration and power'. Eighteen of these projects were secular. The popes involved were mainly Hadrian I and Leo III.
72. None of the twenty-two churches known to have been built between 860 and 1000, with the exception of Sergius III's (904–11) repairs to the Lateran, which may possibly have included the apse mosaic, was a papal foundation and none appears to have contained mosaic: Coates-Stephens, 'Dark Age architecture', 219; 220 and n.24 on the apse as possibly the work of Sergios III. Instead they can all be attributed to members of the up-and-coming nobility of the tenth century, for personal or monastic use, making statements about their wealth, authority and prestige. Some papal work is recorded – Stephen V at S. Apostoli and Anastasius III's (911–13) restoration of S. Adriano, for example – suggesting that popes were not inactive in this period.
73. Goodson, *The Rome of Pope Paschal*, 14–15.
74. *Ibid.* 68.
75. *Ibid.* 66.
76. Coates-Stephens, 'Dark Age architecture', 219; 220 and n.24 on the apse as possibly the work of Sergios III.
77. B. Brenk, 'Zum Bildprogramm der Zenokapelle in Rom', *Archivio español de arqueología*, 45–7 (1972–74), 213–22; also P. J. Nordhagen, 'Images of rulership. The birth of the Byzantine cross-domed church as a receptacle for pictorial decoration', in eds. O. Brandt and P. Pergola, *Marmoribus vestita: miscellanea in onore di Federico Guidobaldi* (Vatican City, 2011), vol. 1, 979–92, and P. J. Nordhagen, 'Constantinople on the Tibur: the Byzantines in Rome and the iconography of their images', in ed. Smith, *Early Medieval Rome and the Christian West*, 113–34, where, in the case of the Maria Regina icon of S. Maria in Trastevere, the idea of Byzantine artists becomes circular. For an alternative view making the case that systematic cultural borrowing from Constantinople was limited in Rome and indeed the West more widely, see L. Brubaker, 'Material culture and the myth of Byzantium', in eds. G. Arnaldi and G. Cavallo, *Europa medieval e mondo bizantino* (Rome, 1997), 33–41.
78. *LP*, Paschal I, and Goodson, *The Rome of Pope Paschal*, 187.
79. Brenk, 'Zum Bildprogramm'; discussion in Brubaker and Haldon, *Byzantium in the Iconoclast Era: Sources*, 443.
80. As John VII's decoration of the church predates these events and Paul I's decoration is said to be 'Roman' in style, this is a tricky one to uphold. This quotation comes from February 2015's *Art Newspaper*, announcing the opening to the public of S. Maria Antiqua. The *Art Newspaper* is not alone, however: the labels in the re-opened church enthusiastically point out the Byzantinism of the images throughout it.
81. Goodson, *The Rome of Pope Paschal I*, 37.
82. If Spain is correct: S. Spain, 'Carolingian restorations of the mosaics of Sta Maria Maggiore in Rome', *Gesta*

16 (1977), 13–22, and S. Spain, 'The restoration of the Sta. Maria Maggiore mosaics', *Art Bulletin* 65 (1983), 325–8.

83. See, for example, Oakeshott, *The Mosaics of Rome*, 212, where the 'master' of the Zeno Chapel is seen as too good to have been the artist of the apse mosaic. From observation in the chapel, I think the Zeno faces are largely glass, including white glass, increasingly a Roman rather than a Byzantine product.
84. C. B. McClendon, 'Louis the Pious, Rome and Constantinople', in ed. C. L. Striker, *Architectural Studies in Memory of Richard Krautheimer* (Mainz, 1996), 103–6; Brenk, 'Zum Bildprogramme'. A wide range of precursors for Paschal's Zeno Chapel have also been identified. See G. Mackie, 'Abstract and vegetal design in the San Zeno Chapel Rome: the ornamental setting of an early medieval funerary programme', *Papers of the British School at Rome* 63 (1995), 159–82; G. Mackie, 'The San Zeno Chapel: a prayer for salvation', *Papers of the British School at Rome* 57 (1989), 172–99; R. Wisskirchen, 'Das Mosaikprogramme von S. Prassede in Rom', *Jahrbuch für Antike und Christentum* 19 (1990), 11–26; R. Wisskirchen, 'Zur Zenokapelle in S. Prassede', *Frühmittelalterliche Studien* 25 (1991), 96–108; R. Wisskirchen, *Die Mosaiken der Kirche Sta Prassede in Rom* (Mainz, 1992).
85. C. B. McClendon, 'Old St Peter's and the Iconoclastic controversy', in eds. R. McKitterick, J. Osborne, C. M. Richardson and J. Story, *Old Saint Peter's, Rome* (Cambridge, 2013), 214–28, for St Peter's as a symbol of papal Orthodoxy.
86. Argued by Goodson, 'Revival and reality'.
87. Theophanes Continuatus: ed. I. Bekker, *Theophanes continuatus: Ioannes Cameniata, Symeon Magister, Georgius monachus* (Bonn, 1838), 139ff.; tr. in C. Mango, *Art of the Byzantine Empire: Sources and Documents* (Toronto, 1974), 161–5. Also see Brubaker and Haldon, *Byzantium in the Iconoclast Era: History*, 422–3.
88. O. Wulff, *Die Koimesiskirche in Nikaia und ihre Mosaiken* (Strasburg, 1903); F. Schmitt, *Die Koimesis-Kirche von Nikaia: das Bauwerk und die Mosaiken* (Berlin, 1927); P. A. Underwood, 'The evidence of restorations in the sanctuary mosaics of the church of the Dormition at Nicaea', *DOP* 13 (1959), 235–43.
89. For this homily, the seventeenth, and its date, C. Mango, *The Homilies of Photius, Patriarch of Constantinople* (Cambridge, Mass., 1958), 279–96.
90. C. Mango and E. J. W. Hawkins, 'The apse mosaics of St. Sophia at Istanbul. Report on work carried out in 1964', *DOP* 19 (1965), 113 + 115–51.
91. Photios, *Homily* 17, text in B. Laourda, *Phōtiou Homiliai: ekdosis keimenou, eisagōge kai scholia* (Thessaloniki, 1959), 164–72.
92. By N. Oikonomides, 'Some remarks on the apse mosaic of St. Sophia', *DOP* 39 (1985), 111–15, and again by P. Speck, 'Photios on the mosaic in the apse of Hagia Sophia', tr. as Study VI in his *Understanding Byzantium* (Aldershot, 2003), 33–6.
93. Mango and Hawkins, 'The apse mosaics of St. Sophia'. Z. Skhirtladze, 'The image of the Virgin on the Sinai hexaptych and the apse mosaic of Hagia Sophia, Constantinople', *DOP* 68 (2015), 369–86, summarises the arguments and establishes that the image certainly could not be fourteenth century.
94. C. Mango and E .J. W. Hawkins, 'The mosaics of St Sophia at Istanbul: the Church Fathers in the north tympanum', *DOP* 26 (1972), 1 + 3–41. The Fathers are: south: unknown, Anthimus, Basil, Gregory Nazianzenus, Dionysios, Nicholas, Gregory the Illuminator; north: Ignatios the Younger, Methodios, Gregory Thaumaturgos, John Chrysostom, Ignatios Theophoros, Cyril, Athanasios. The selection of saints included several celebrated in the liturgy of Hagia Sophia. The figures are between 1.84 and 1.89 metres high.
95. Mango and Hawkins, 'Church Fathers', 38–9. For these rooms as the Large and Small *Sekreta*, R. Cormack and E. J. W. Hawkins, 'The mosaics of St Sophia at Istanbul: the rooms above the southwest vestibule and ramp', *DOP* 31 (1977), 177–251, at 200–1.
96. This is the figure given in P. A. Underwood, 'A preliminary report on some unpublished mosaics in Hagia Sophia: season of 1950 of the Byzantine Institute', *American Journal of Archaeology* 55 (1951), 367–70.
97. Cormack and Hawkins, 'The rooms above the southwest vestibule and ramp', see the images as a pendant to the work of Photios in the apse and date it to 847–870s.
98. *Ibid.* 210; the story is told by Theophanes, *Chronographia*, AM 6259, Mango and Scott, *Chronicle*, 611; and by Patriarch Nikephoros, *Historia syntomos (Breviarium)*, 86; *Nikephoros, Patriarch of Constantinople, Short History*, text, tr. and commentary C. Mango (Washington, DC, 1990), 161.
99. Cormack and Hawkins, 'The rooms above the southwest vestibule and ramp'.
100. *Ibid.* 238.
101. Mango and Hawkins, 'Church Fathers', 21.
102. Underwood, 'A preliminary report'; Cormack and Hawkins, 'The rooms above the southwest vestibule and ramp', 235.
103. E. J. W. Hawkins, 'Further observations on the narthex mosaic in St. Sophia at Istanbul', *DOP* 22 (1968), 151 + 153–66, esp. 163.
104. *Patria*, 4, 32.
105. R. Cormack, 'Interpreting the mosaics of St Sophia at Istanbul', *Art History* 4 (1981), 131–49, at 135.
106. T. Whittemore, *The Mosaics of St. Sophia at Istanbul: Preliminary Report on the First Year's Work, 1931–1932: The Mosaics of the Narthex* (Oxford, 1933); Hawkins, 'Further observations'. The two texts are from the Gospel of John.
107. Summarised in Cormack, 'Interpreting the mosaics', 138–41.
108. *Ibid.* 140 and n.32.
109. Hawkins, 'Further observations', for how we know; K. Boston, 'The power of inscriptions and the trouble with

texts', in eds. A. Eastmond and L. James, *Icon and Word: The Power of Images in Byzantium* (Aldershot, 2003), 35–58, for suggestions why.

110. Cormack and Hawkins, 'The rooms above the southwest vestibule and ramp', 207 and n.68.

111. The Pharos Church described in Photios' 10th Homily (ed. B. Laourdas, *Photiou Homiliai* (Thessaloniki, 1959) and tr. C. Mango, *The Homilies of Photios, Patriarch of Constantinople: Translation and Commentary* (Cambridge, Mass., 1958)); the Nea Ekklesia, the Church of Elijah and the Kainourgion are described in the *Life of Basil* (*Vita Basilii: Chronographiae quae Theophanis Continuati nomine fertur liber quo vita Basilii Imperatoris amplectitur. Corpus* Fontium Historiae *Byzantinae* 42, ed. and tr. I. Ševčenko (Berlin: de Gruyter, 2011); for the Pege, see the anonymous *De sacris aedibus Deiparae ad Fontem* (about the Kataphyge), *Acta Sanctorum*, November III, 882; for the Kauleas Church and the church built by Stylianos Zaoutzes, see Leo VI's Sermons 28 (Kauleas) and 34 (Stylianos Zaoutzes) in *Homilies*, ed. T. Antonopoulou, *Leonis VI Sapientis Imperatoris Byzantini Homiliae* (Turnhout, 2008); and for the Holy Apostles, ed. L. James, *Constantine of Rhodes, On Constantinople and the Church of the Holy Apostles*, including a new Greek edition by Ioannis Vassis (Farnham, 2012).

112. W. T. Woodfin, 'A "maiestas domini" in Middle-Byzantine Constantinople', *CahArch* 51 (2003–4), 45–54, suggested that it was a post-Iconoclastic image on the basis that it was unlikely any early mosaics in the church would have survived Iconoclasm. It is presumably for the same reason that the Benaki Museum fragments of a small mosaic image of the Mother of God mentioned in Chapter 6 are always dated to the tenth rather than the fifth century. It is not an unreasonable argument but we do not know for certain whether the mosaics of the Studion were destroyed and replaced at this time. The church was restored in the eleventh century and the thirteenth, so the Benaki mosaic could equally well date to either of these periods.

113. *Life of Basil*, 89.

114. P. A. Underwood and E. J. W. Hawkins, 'The mosaics of Hagia Sophia at Istanbul. A report on work done in 1959 and 1960. The portrait of the Emperor Alexander', *DOP* 15 (1961), 189–217; dimensions at 191 n.6. N. Teteriatnikov, 'Why is he hiding? The mosaic of Emperor Alexander in Hagia Sophia, Constantinople', *Arte medievale* 1 (2012), 61–76.

115. T. Whittemore, *The Mosaics of St Sophia at Istanbul: Second Preliminary Report: Work Done in 1933 and 1934: The Mosaics of the Southern Vestibule* (Oxford, 1936); P. Niewöhner and N. Teteriatnikov, 'The south vestibule of Hagia Sophia at Istanbul. The ornamental mosaics and the private door of the patriarchate', *DOP* 68 (2015), 117–55.

116. Though Niewöhner and Teteriatnikov, 'The south vestibule', suggest that the vestibule was a significant patriarchal and imperial entrance to the church in the Middle Byzantine period. For Justinian's standing in later Byzantium see P. Magdalino, 'The distance of the past in early medieval Byzantium', in *Ideologie e pratiche del reimpiego nell'alto medioevo*, Settimane di Studio del Centro Italiano di Studi sull'alto medioevo (Spoleto, 1999), 115–46.

117. Seen in both the *Life of Basil* and Constantine of Rhodes' poem.

118. R. Cormack, 'The apse mosaics of S. Sophia at Thessaloniki', *Deltion tes Christianikes Archaiologikes Etaireias* 10 (1980–81), 111–35, discusses the dating problems at 123–6. In R. Cormack, *The Byzantine Eye: Studies in Art and Patronage* (London, 1989), Additional notes and comments to Study V, 7–10, Cormack updates the arguments of his earlier article; eds. C. Bakirtzis, E. Kourkoutidou-Nikolaidoli and C. Mavropoulou-Tsioumi, *Mosaics of Thessaloniki: 4th to 14th Century* (Athens, 2012), 290–4, also proposes a ninth-century date.

119. Asked by P. J. Nordhagen, 'Images of rulership. The birth of the Byzantine cross-domed church as a receptacle for pictorial decoration', in eds. Brandt and Pergola, *Marmoribus vestita*, vol. 2, 979–92, at 984. Images of the Ascension are known from other media than mosaic before Iconoclasm, and there is no reason that the scene could not have been done in mosaic before the ninth century.

120. Bakirtzis et al., *Mosaics of Thessaloniki*, 285–6, suggesting that Andrew's presence might be a specifically ninth-century comment on the struggle between the Western Church of Rome and the Eastern Church in Constantinople for supremacy in the Balkans.

121. Koloneia: A. A. M. Bryer and D. Winfield, *The Monuments and Topography of the Pontos* (Washington, DC, 1985), 150; Dereağzi: J. Morganstern, *The Byzantine Church at Dereağzı and its Decoration* (Tübingen, 1983): fragments of mosaic showing bits of a Christ in Majesty, a male figure, scenes with male and female figures and plant scrolling were discovered in excavations in the diakonikon, the nave of the church and the 'North Octagon' of the (?)monastery site of Dereağzi. These fragments used a range of glass: red dipped in paint, yellow, amber, brown, blues, greens.

122. Amorium: E. A. Ivison, 'Amorium in the Byzantine Dark Age (seventh to ninth centuries)', in ed. Henning, *Post-Roman Towns*, vol. 2, 25–60.

123. Underlining the mobility of a skilled labour force, a point also made by Brubaker and Haldon, *Byzantium in the Iconoclast Era: History*, 446, in the context of masons and bricks.

124. Christ Chalkites: S. Eyice, 'Arslanhane' ve sevresinin arkeolojisi', *Istanbul Arkeoloji Muzeleri Yilligi* 11/12 (1964); at Lips, the material is from the vaults of the north church: C. Mango and E. J. W. Hawkins, 'Additional notes on the Monastery of Lips', *DOP* 18 (1964), 299–315; Myrelaion: P. Niewöhner, 'Der frühbyzantinische Rundbau beim Myrelaion in Konstantinopel. Kapitelle, Mosaiken und

Ziegelstempel', *Istanbuler Mitteilungen* 60 (2010), 405–53; Atık Mustafa Pasha Camii: M. I. Tunay, 'Byzantine archaeological findings in Istanbul', in ed. N. Necipoğlu, *Byzantine Constantinople: Monuments, Topography and Everyday Life* (Leiden, 2001), 217–31, at 228–29; Bukoleon: L. Utkan, *Hormisdas Sarayı Kazısı Küçük Buluntuları* (Istanbul, 1996).

125. K. A. C. Creswell, *Early Muslim Architecture* (first edition, Oxford, 1940), vol. 2, 232–45; A. Northedge, 'An interpretation of the Palace of the Caliph at Samarra (Dar al-Khilafa or Jawsaq al-Khaqani)', *Ars Orientalis* 23 (1993), 143–70. Gold tesserae from Samarra are very large in comparison to Byzantine gold tesserae.
126. K. Weitzmann, 'Introduction to the mosaics and monumental paintings', in G. H. Forsyth and K. Weitzmann, *The Monastery of Saint Catherine at Mount Sinai: The Church and Fortress of Justinian* (Ann Arbor, 1973), 11, said it was 'centuries later' and of 'very low quality'.
127. Abu al-Makarim published as Abu Salih, the Armenian, *The Churches and Monasteries of Egypt and some Neighbouring Countries*, tr. B. T. A. Evetts (Oxford, 1895), 148–50 and 282.
128. R. Hillenbrand, *Islamic Architecture: Form, Function and Meaning* (Edinburgh, 1994), 443.
129. Described in the *Russian Primary Chronicle*, tr. S. H. Cross and O. Sherbowitz-Wetzor, *The Russian Primary Chronicle: Laurentian Text* (Cambridge, Mass., 1953), 110–11.
130. For the Samarra palace, see Creswell, *Early Muslim Architecture*, vol. 2, 268–71. J. M. Bloom, 'The mosque of al-Ḥākim in Cairo', *Muqarnas* 1 (1983), 25.
131. O. Remie Constable, 'Muslim merchants in Andalusī international trade', in ed. S. K. Jayyusi, with M. Marín, *The Legacy of Muslim Spain* (Leiden, 1992), 759–73.
132. H. Stern, *Les mosaïques de la Grande Mosquée de Cordoue* (Berlin, 1976), gives a full description of the mosaics. Also J. Dodds, 'The arts of al-Andalus', in ed. Jayyusi, *The Legacy of Muslim Spain*, 599–620; O. Grabar, 'Two paradoxes in the art of the Spanish peninsula', in *ibid.* 583–91, esp. 584–5 on the Great Mosque; A. Cutler, 'Constantinople and Cordoba: cultural exchange and cultural difference in the ninth and tenth centuries', originally 1997 but best read as Study III in A. Cutler, *Image Making in Byzantium, Sasanian Persia and the Early Muslim World* (Farnham, 2009).
133. R. Hillenbrand, 'Medieval Córdoba as a cultural centre', in ed. Jayyusi, *The Legacy of Muslim Spain*, 114. On the history of the mosque, J. Bloom, 'The revival of Early Islamic architecture by the Umayyads of Spain', in eds. M. J. Chiat and K. L. Reyerson, *The Medieval Mediterranean: Cross-cultural Contacts* (St. Cloud, MN, 1988), 35–41; J. Dodds, 'The Great Mosque of Córdoba', in ed. J. Dodds, *Al-Andalus: The Art of Islamic Spain* (New York, 1992), 11–25; N. N. N. Khoury, 'The meaning of the Great Mosque of Córdoba in the tenth century', *Muqarnas* 13 (1996), 80–98.
134. C. N. Duckworth et al., 'Electron microprobe analysis of 9th–12th century Islamic glass from Córdoba, Spain', *Archaeometry* 57 (2015), 27–50.
135. Stern, *Grande Mosquée de Cordoue*, says that this is a mistake and a confusion of names, and that it should all be understood as the work of al-Hakam.
136. Abu al-Abbas Ahmad ibn Muhammad ibn Idhari al-Marrakushi, author of *Al-Bayan al-Mughrib*: see G. Marçais, 'Sur les mosaïques de la Grande Mosquée de Cordoue', in *Studies in Islamic Art and Architecture in Honour of Professor K. A. C. Creswell* (Cairo, 1965), 147–56; E. de Lorey and M. van Berchem, 'Les mosaïques de la Mosquée des Omayyads à Damas', *Monuments et mémoires: Académie des inscriptions de belles-lettres* 30 (1929), 132–34. According to Jonathan Bloom, 320 qintar represent about 16,000 kg.
137. Marçais, 'Sur les mosaïques', 148. Bloom, 'The revival of Early Islamic architecture', does not believe the al-Walid stories.

10 A UNIVERSAL LANGUAGE?

1. The mosaic is about 50 × 50 cm. It could be Byzantine; it also looks very restored, with the Virgin's halo of mother-of-pearl circles like that of 'Justinian' in S. Apollinare Nuovo, Ravenna. The provenance is unknown. G. Barnardi, M. Macchiarola and A. Ruffini, 'Il frammento musivo con la vergine del museo civico medieval di Bologna: uno studio integrato archeometrico-stilistico', in ed. C. Angelilli, *AISCOM* 10 (Rome, 2005), 595–604, present an analysis of thirteen tesserae and suggest that the mosaic is Venetian (or, at least, that the glass is).
2. O. Demus. *Byzantine Mosaic Decoration* (Oxford, 1948).
3. R. W. Schultz and S. H. Barnsley, *The Monastery of Saint Luke of Stiris in Phocis* (London, 1901), believed that the katholikon was the earlier of the two churches; E. G. Stikas, *To oikodomikon chronikon tēs Monēs Hosiou Louka Phōkidos* (Athens, 1970), corrected this.
4. P. M. Mylonas, *Monastery of Hosios Loukas the Stiriotis: Architectural Analysis of the Four Churches* (Athens, 2005).
5. A. Piotrowski, 'Architecture and the Iconoclast controversy', in eds. B. A. Hanawalt and M. Kolbiaka, *Medieval Practices of Space* (Minneapolis, 2000), 101–27; C. Nesbitt, 'Shaping the sacred. Light and worship', *Byzantine and Modern Greek Studies* 36 (2012), 139–60.
6. M. Chatzidakis, 'À propos de la date et du fondateur de Saint-Luc', *CahArch* 19 (1969), 127–50; M. Chatzidakis, 'Précisions sur le fondateur de Saint-Luc', *CahArch* 22 (1972), 89–113, made the case for either 1011 or 1022, as also in N. Chatzidakis, *Hosios Loukas: Byzantine Art in Greece* (Athens, 1996 in Greek, 1997 in English), esp. 10–12, and N. Chatzidakis, 'The Abbot Philotheos, founder of the katholikon of Hosios Loukas', in eds. C. Entwistle and L. James, *New Light on Old Glass: Recent Research on*

Byzantine Mosaics and Glass (London, 2013), 254–9. For the alternative date, see H. Belting, 'Byzantine art in southern Italy', *DOP* 28 (1974), 1–29, esp. n.49 on 15; C. Mango, 'Les monuments de l'architecture du XIe siècle et leur signification historique et sociale', *Travaux et mémoires* 6 (1976), 351–65; D. I. Pallas, 'Zur Topographie und Chronologie von Hosios Lukas: eine kritische übersicht', *Byzantinische Zeitschrift* 78 (1985), 94–107; N. Oikonomides, 'The first century of the Monastery of Hosios Loukas', *DOP* 46 (1992), 245–55; R. Cormack, 'Viewing the mosaics of the monasteries of Hosios Loukas, Daphni and the church of Santa Maria Assunta, Torcello', in eds. Entwistle and James, *New Light on Old Glass*, 242–53.

7. T. Chatzidakis-Bacharas, *Les peintures murales de Hosios Loukas: les chapelles occidentales* (Athens, 1982), dates the paintings of the side chapels to 1035–55, suggesting that the mosaics and wall paintings were planned as a unit, which may have taken up to thirty years to complete, taking it up to 1041–52. C. L. Connor, *Art and Miracles in Medieval Byzantium: The Crypt at Hosios Loukas and its Frescoes* (Princeton, 1991), 122–3, saw the mosaics and wall paintings as contemporary but dated the katholikon to 956–70, and its decoration to 970–1000. All the other literature has treated the representation of St Nikon the Metanoeite in the mosaics as an indication that they date after his death in *c.* 1000.
8. Oikonomides, 'First century of Hosios Loukas', suggesting that the wall paintings of the crypt were finished soon after Theodore's death, perhaps immediately after 1048, since his portrait is included in the programme. D. Mouriki, *The Mosaics of Nea Moni on Chios* (Athens, 1985), 255, also asserts that the wall paintings and mosaics were contemporary and done under the patronage of Theodore Leobachos, though, at 259, she also saw the possibilities of Constantine IX as a patron. In D. Mouriki, 'Stylistic trends in monumental painting of Greece during the eleventh and twelfth centuries', *DOP* 34–5 (1980–1), 77–124, she dated the decoration of Hosios Loukas to the 1030s.
9. Mouriki, *Nea Moni on Chios*, 25–6, on the patronage of Constantine IX elsewhere; also C. Bouras, *Nea Moni on Chios: History and Architecture* (Athens, 1982), 24.
10. Mouriki, *Nea Moni on Chios*, 28–9, on the date.
11. R. Ousterhout, 'Originality in Byzantine architecture: the case of Nea Moni', *Journal of the Society of Architectural Historians* 51 (1992), 48–60.
12. Daphni has suffered badly from earthquake damage. G. Millet, *Le monastère de Daphni: histoire, architecture, mosaïques* (Paris, 1899); R. Janin, *La géographie ecclésiastique de l'empire byzantin: les églises et les monastères des grands centres byzantins: Bithynie, Hellespont, Latros, Galèsios, Trébizonde, Athènes, Thessalonique* (Paris, 1975), esp. 311–13, for documentation on Daphni, which he assumed was dedicated to the *Theotokos*. Mouriki, *Nea Moni on Chios*, 262–5, dated the Daphni mosaics to the last quarter of the eleventh century.
13. On the amount of restoration see R. Cormack, 'Rediscovering the Christ Pantokrator at Daphni', *Journal of the Warburg and Courtauld Institutes* 71 (2008), 55–74.
14. Chapter 4 discussed the differences and similarities in more detail. See also L. James, 'Monks, monastic art, the sanctoral cycle and the middle Byzantine church', in eds. M. Mullett and A. Kirby, *The Theotokos Evergetis and Eleventh-century Monasticism* (Belfast, 1994), 162–75.
15. H. Maguire, 'The mosaics of Nea Moni: an imperial reading', *DOP* 46 (1992), 205–14.
16. The first three essays in J. Herrin, *Margins and Metropolis* (Princeton, 2013), offer a picture of Greece in the Byzantine era.
17. See Cormack, 'Rediscovering' and 'Viewing'.
18. Discussed in Cormack, 'Rediscovering'.
19. E. Diez and O. Demus, *Byzantine Mosaics: Hosios Lucas and Daphni* (Cambridge, Mass., 1931), 92–4.
20. Cormack, 'Rediscovering'.
21. Cormack, 'Viewing'.
22. *Ibid.*
23. Ousterhout, 'Originality in Byzantine architecture'.
24. Diez and Demus, *Byzantine Mosaics in Greece*, 30–1, 46. The suggestion of A. Frolow, 'La date des mosaïques de Daphni', *Corso di cultura sull' arte ravennate e bizantina* 9 (1962), 295–9, that the mosaics were late tenth century and influenced by the Parthenon sculptures, has not been widely accepted.
25. Cormack, 'Viewing', suggests that while it is not necessary to assume the co-operation of Constantine Monomachos in the provision of mosaics, it is most probable that the mosaicists did come ultimately from Constantinople; he finds it hard to believe that they were from a local workshop in Thebes or even Thessaloniki (where the eleventh-century Virgin and Child in the apse of St Sophia was plausibly the product of local artists, as Cormack suggested in 'The apse mosaics of S. Sophia at Thessaloniki', *Deltion tes Christianikes Archaiologikes Etaireias* 10 (1980–1), 111–35; reprinted in *The Byzantine Eye* (London, 1989), V, with additional notes). See Mouriki, *Nea Moni on Chios*, 1–3, on the mosaicists at Nea Moni coming from Constantinople.
26. O. Demus, 'Zu den Mosaiken der Hauptapsis von Torcello', *Starinar* 20 (1969), 53–7, dated the lower section of the apse to the 1050s; also see O. Demus, *The Mosaics of San Marco in Venice*, 2 vols. in 4 (Chicago, 1984), vol. 1, 26–9 and ch. 20, 278–94; the quotation is from 282.
27. Cormack, 'Viewing'. Mouriki, *Nea Moni on Chios*, felt that the mosaics of Hosios Loukas looked stylistically earlier than the related mosaics of St Sophia at Kiev, a church begun, according to Lazarev, in around 1037 and completed between 1042 and 1046.
28. Cormack, 'Viewing'. For the head of the apostle, see R. Cormack, *An Apostle Mosaic from Medieval Torcello*, Lot 64, European works of art sale, Sotheby's London, 9 July 1987; I. Andreescu-Treadgold, cat. 293, pp. 452–3, in H. C. Evans and W. D. Wixom (eds.), *The Glory of*

Byzantium (New York, 1997). For the head of the angel, see J. Durand, cat. entry 144, pp. 222–3, in ed. J. Durand et al., *Byzance: l'art byzantin dans les collections publiques françaises* (Paris, 1992).

29. R. Arletti, C. Fiori and M. Vandini, 'A study of glass tesserae from mosaics in the monasteries of Daphni and Hosios Loukas (Greece)', *Archaeometry* 52 (2010), 796–815; R. Arletti, 'A study of glass tesserae from mosaics in the monasteries of Daphni and Hosios Loukas', in eds. Entwistle and James, *New Light on Old Glass*, 70–5.
30. I. Andreescu-Treadgold and J. Henderson with M. Roe, 'Glass from the mosaics on the west wall of Torcello's Basilica', *Arte medievale* 5 (2006), 87–141; also I. Andreescu-Treadgold and J. Henderson, 'How does the glass of the wall mosaics at Torcello contribute to the study of trade in the 11th century?', in ed. M. M. Mango, *Byzantine Trade, 4th–12th Centuries* (Farnham, 2009), 393–417. At 416, they suggest that the glass was coloured in Byzantium since there is historical evidence for this. That evidence appears to be the story in the *Life* of St Photiene (discussed above in Chapter 1), though that text speaks only of a 'workshop of glass-smelting' which is not necessarily a place where glass was coloured in industrial quantities.
31. E. Crouzet-Pavan, *La mort lente de Torcello: histoire d'une cité disparue* (Paris, 1995); E. Crouzet-Pavan, 'Torcello, mythes et mémoires perdues', in ed. C. Rizzardi, *Venezia e Bisanzio: aspetti della cultura artistica bizantina da Ravenna a Venezia (V–XIV secolo)* (Venice, 2005), 431–54; eds. G. Caputo and G. Gentili, *Torcello alle origini di Venezia tra Occidente et Oriente* (Venice, 2009).
32. See, all by Irina Andreescu-Treadgold, 'Torcello. I. Le Christ inconnu. II. Anastasis et Jugement Dernier: têtes vraies, têtes fausses', *DOP* 26 (1972), 183–223; 'Torcello. III. La chronologie relative des mosaïques pariétales', *DOP* 30 (1976), 245–341; 'Torcello IV. Cappella Sud, mosaici: cronologia relative, cronologia assoluta e analisi delle paste vitree', in ed. R. Farioli Campanati, *III Colloquio internazionale sul mosaico antico: Ravenna, 6–10 settembre 1980* (Ravenna, 1983), vol. 2, 535–51; 'Torcello V. Workshop methods of the mosaicists in the South Chapel', *Venezia Arti* 9 (1995), 15–28; 'Torcello VI. Tre botteghe di mosaicisti nell' XI secolo e la tipologia dei cespugli', in eds. C. Angelilli and C. Salvetti, *AISCOM* 15 (Rome, 2010), 257–68; 'The mosaics of Venice and the Venetian lagoon: thirty-five years of research at Torcello 1', *Arte medievale* 3 (2013), 193–206, and part 2 forthcoming.
33. T. E. F. Dale, 'Inventing a sacred past: pictorial narratives of St Mark the Evangelist in Aquileia and Venice, ca 1000–1300', *DOP* 48 (1994), 53–104; T. Dale, *Relics, Prayer and Politics in Medieval Venetia: Romanesque Painting in the Crypt of Aquileia Cathedral* (Princeton, 1997).
34. Andreescu-Treadgold, 'Torcello IV'.
35. They are Gregory the Great, Martin of Tours, Ambrose of Milan and Augustine of Hippo.
36. For Trullo, see L. Brubaker, 'In the beginning was the Word: art and orthodoxy at the councils of Trullo (692) and Nicaea II (787)', in eds. A. Louth and A. Cassiday, *Byzantine Orthodoxies* (Aldershot, 2006), 95–101.
37. Andreescu-Treadgold, 'Torcello I and II'; Andreescu-Treadgold and Henderson, 'How does the glass . . .?' Diez and Demus, *Byzantine Mosaics*, dated the mosaics of the apostles in the apse to the eleventh century by comparison with Hosios Loukas, and the Virgin in the apse and the west wall of the Last Judgement to the twelfth. Also see I. Andreescu-Treadgold, 'The real and the fake. Two mosaic heads from Venice in American collections', *Studi Veneziani* 36 (1998), 279–300; O. Demus, 'Studies among the Torcello mosaics I', *Burlington Magazine* 82 (1943), 132 + 136 +138–41; 'Studies among the Torcello mosaics II', *Burlington Magazine* 84 (1944), 39 + 41–5.
38. Andreescu, 'Torcello III'.
39. Among such style-based discusssions, R. Polacco, 'Lo stile dei mosaici medievali di Venezia', in ed. C. Rizzardi, *Venezia e Bisanzio: aspetti della cultural artistica bizantina da Ravenna a Venezia (V–XIV secolo)* (Venice, 2005), 455–70, claims, in part because of the elegance of the silhouette, the fluid linearity and the colour, that the apostles of the Last Judgement are Byzantine and similar to Hosios Loukas and to St Sophia in Kiev. A. Nicoletti, 'Precisioni sui mosaici degli apostoli a Torcello', *Arte Veneta* 29 (1975), 19–27, used style to conclude that the Torcello artist was 'probably' Greek (but 'evidently' not from Constantinople, but from Phocis or Macedonia) and that the Torcello mosaics were not 'derivative' of Hosios Loukas but a parallel manifestation of a wide and diverse current in the stylistically softening production which appears in Kiev, Salonika and Ohrid. Make of that what you will.
40. I am grateful to Niamh Bhalla for her advice in discussing the Last Judgement.
41. Otto Demus was eager to find evidence of 'Venetian' masters in the Torcello mosaics: *Mosaics of S. Marco*; Demus, 'Studies among the Torcello mosaics', I and II.
42. Andreescu-Treadgold and Henderson with Roe, 'Glass from the mosaics'; Andreescu-Treadgold and Henderson, 'How does the glass . . .?'
43. D. M. Nicol, *Byzantium and Venice* (Cambridge, 1988) and M. McCormick, 'Where do trading towns come from? Early medieval Venice and the northern emporia', in ed. J. Henning, *Post-Roman Towns: Trade and Settlement in Europe and Byzantium* (Berlin and New York, 2007), vol. 1, 41–68, both make the case that Venice emerged in the eighth century more or less spontaneously, not created by kings or emperors. Once it had wealth, it attracted attention.
44. Demus, *The Mosaics of San Marco*, vol. 1, 278.
45. J. Warren, 'The first church of S. Marco in Venice', *Antiquaries Journal* 72 (1990), 327–59, on the ninth-century church; R. J. Mainstone, 'The first and second churches of San Marco reconsidered', *Antiquaries Journal* 71 (1991), 123–37.

46. Demus, *The Mosaics of S Marco*, vol. 1, 1–4.
47. *Ibid.* 32.
48. *Ibid.* 23–6 and 43–54, though see also E. J. W. Hawkins and L. James, 'The east dome of San Marco: a reappraisal', *DOP* 48 (1994), 229–42.
49. Demus, *The Mosaics of San Marco*, vol. 1, 29 and 280–1.
50. Nicol, *Byzantium and Venice*; A. Pertusi, 'Venetia e Bisanzio nel secolo XI', in A. Pertusi, *Saggi Veneto-Bizantini* (Florence, 1990), 67–101.
51. C. Rizzardi, *Mosaici altoadriatici: il rapporto artistico Venezia–Bisanzio–Ravenna in età medievale* (Ravenna, 1985).
52. P. Fortini Brown, *Venice and Antiquity* (New Haven, 1997).
53. For discussion and bibliography of the relationship of the Holy Apostles and S. Marco, see ed. L. James, *Constantine of Rhodes, On Constantinople and the Church of the Holy Apostles*, including a new Greek edition by Ioannis Vassis (Farnham, 2012), 192 ff.; Demus, *The Mosaics of San Marco*, vol. 1, 232; I. Andreescu, 'Les mosaïques de la lagune vénitienne aux environs de 1100', *Actes du XV Congrès international d'études byzantines II: art et archéologie: Athènes 1976* (Athens: K. Michalas, 1981), 15–30.
54. O. Demus, *The Church of San Marco in Venice* (Washington, DC, 1960), 38, 281.
55. Demus, *The Mosaics of San Marco*, vol. 1, 25, 32. Further, the colours of glass employed are unusual: the brilliant white glass is not found in Byzantium and the vivid orange-vermillion coloured tesserae are very unusual in a Byzantine context: E. J. W. Hawkins, 'Further observations on the narthex mosaic in St. Sophia at Istanbul', *DOP* 22 (1968), 151 + 153–66, esp. 165–6.
56. From John 10:9. On Grottaferrata and its dates, see A. Ambrogi, *L'Abbazia di San Nilo a Grottaferrata: il complesso monumentale e la raccolta archeologica* (Rome, 2013); V. Pace, 'La chiesa abbaziale di Grottaferrata e la sua decorazione del medioevo', *Bollettino della Badia Grec di Grottaferrata* 41 (1987), 47–87, suggesting *c.* 1000 or the very early twelfth century; V. Pace, 'Il mosaico della deisis sul portale d'ingresso alla chiesa dell'abbazia di San Nilo a Grottaferrata', in ed. I. Stevović, *ΣΥΜΜΕΙΚΤΑ: Collection of Papers Dedicated to the 40th Anniversary of the Institute for Art History, Faculty of Philosophy, University of Belgrade* (Belgrade, 2012), 79–84, suggests *c.* 1100; H. L. Kessler, 'Una chiesa magnificamente ornata di pitture', in ed. E. Fabbricatore, *San Nilo: il monastero italo-bizantino di Grottaferrata, 1004–2004: mille anni di storia, spiritualità e cultura* (Rome, 2005), 73–90; M. Andaloro, 'Polarità bizantina, polarità Romane nelle pittura di Grottaferrata', in ed. W. Tronzo, *Italian Church Decoration of the Middle Ages and Early Renaissance: Functions, Forms and Regional Traditions* (Bologna, 1989), 13–26, suggests the 1240s.
57. E. Kitzinger, 'The first mosaic decoration of Salerno cathedral', *Jahrbuch der österreischisches Byzantinistik* 21 (1972), 149–62. Also B. Marchese and V. Garzillo, 'An investigation of the mosaics in the cathedral of Salerno Part 1. Characterisation of binding material', *Studies in Conservation* 28 (1983), 127–32, and B. Marchese and V. Garzillo, 'An investigation of the mosaics in the cathedral of Salerno Part II. Characterisation of some mosaic tesserae', *Studies in Conservation* 29 (1984), 10–16.
58. The church was founded in 1080 and consecrated in 1085, the year of Alfanus' death: the consecration may indicate the mosaics were in place. However Marchese and Garzillo, 'An investigation of the mosaics Part II', 11 and n.14, suggest that the mosaics of the apse arch could not belong to the same period in which the cathedral was built since they overlie two walled-up windows. Fuller publication is needed.
59. Kitzinger, 'The first mosaic decoration of Salerno', 155 and n.24.
60. Leo of Ostia, *The Chronicle of Monte Cassino* 3, 27: 'Et quoniam artium [i.e. wall and pavement mosaic] istarum ingenium a quingentis et ultra iam annis magistra Latinitas intermiserat'; text and translation taken from H. Bloch, 'Monte Cassino, Byzantium and the West in the earlier Middle Ages', *DOP* 3 (1946), 198 and n.110, but see Leo of Ostia, *Chronica monasterii Casinensis*, ed. H. Hoffmann, Monumenta Germaniae historica 34 (Hanover, 1980), 393–409.
61. See R. Krautheimer, *Rome: Profile of a City* (Princeton, 1988), 78–82.
62. E. Kitzinger, 'The Gregorian reform and the visual arts: a problem of method', *Transactions of the Royal Historical Society* 22 (1972), 93, 94, 99. Similarly, W. Oakeshott, *The Mosaics of Rome: From the Third to the Fourteenth Centuries* (London, 1967), 243, proposed that Desiderius' mosaicists went to work in Rome in the revival of mosaics there in the twelfth century.
63. For another critique of Monte Cassino, see J. Mitchell, '*Giudizio sul Mille*: Rome, Montecassino, S. Vincenzo al Volturno, and the beginnings of the Romanesque', in eds. C. Bolgia, R. McKitterick and J. Osborne, *Rome across Time and Space* (Cambridge, 2011), 167–81.
64. G. Loud, 'Montecassino and Byzantium in the tenth and eleventh centuries', in ed. Mullett and Kirby, *The Theotokos Evergetis*; G. Loud, 'Abbot Desiderius of Monte Cassino and the Gregorian papacy', *Journal of Ecclesiastical History* 30 (1979), 305–30.
65. Mitchell, '*Giudizio sul Mille*'. Also see Dale Kinney's review of H. Bloch in *Art Bulletin* 72 (1990), 136–8, in which she makes a case for Monte Cassino not being the root of everything.
66. R. Coates-Stephens, 'Dark Age architecture in Rome', *Papers of the British School at Rome* 65 (1997), 177–232; S. de Blaauw, 'Reception and renovation of Early Christian churches in Rome, c1050–1300', in eds. Bolgia et al., *Rome across Time and Space*, 151–66.
67. Bloch, 'Monte Cassino, Byzantium'; H. Bloch, 'The new fascination with ancient Rome', in eds. R. L. Benson and G. Constable, *Renaissance and Renewal in the Twelfth Century* (Cambrige, Mass., 1982), 615–36.
68. G. Grunhouse, 'The significance of Peter in the artistic patronage of Desiderius, abbot of Montecassino', *RACAR* 22 (1995), 7–18.

69. U.-R. Blumenthal, 'History and tradition in eleventh-century Rome', *Catholic Historical Review* 79 (1993), 185–96.
70. As H. Belting, 'Byzantine art among Greeks and Latins in Southern Italy', *DOP* 28 (1974), 1–29, pointed out.
71. D. Jacoby, 'Venetian commercial expansion in the eastern Mediterranean, 8th–11th centuries', in ed. Mango, *Byzantine Trade*, 371–92.
72. B. Kiilerich, 'Likeness and icon: the imperial couples in Hagia Sophia', *ActaNorv* 18 (2004), 175–203.
73. T. Whittemore, *The Mosaics of Haghia Sophia at Istanbul: Work Done in 1935–1938: The Imperial Panels of the South Gallery* (Oxford, 1942); R. Cormack, 'Interpreting the mosaics of S. Sophia at Istanbul', *Art History* 4 (1981), 131–46, esp. 141–6; B. Hill, L. James and D. Smythe, 'Zoe. The rhythm method of imperial renewal', in ed. P. Magdalino, *New Constantines* (Aldershot, 1994), 215–30. For other examples of similar changes, see the manuscript of the *Homilies* of John Chrysostom (Paris, BN Ms Coislin 79) which originally showed Michael VII and now shows his successor, Nikephoros III Botaneiates: H. Maguire, cat. entry 143 in eds. H. C. Evans and W. D. Wixom, *The Glory of Byzantium* (New York, 1997), 207–8.
74. N. Oikonomides, 'The mosaic panel of Constantine IX and Zoe in Saint Sophia', *Revue des études byzantines* 36 (1978), 219–32.
75. Michael Psellos, *Chronographia*, IV.31 (Cosmas and Damien) and VI.185–6 (Mangana), ed. D. R. Reinsch, *Michaelis Pselli Chronographia* (Berlin, 2014) and tr. E. R. A. Sewter, *Fourteen Byzantine Rulers* (London, 1966). For the Peribleptos, see Ruy Gonzalez de Clavijo, *Historia del gran Tamorlan y itinerarion y enarracion del viage y relacion de la embajada* (Madrid, 1782), quoted in R. Janin, *La géographie ecclésiastique de l'empire byzantin: le siège de Constantinople et le patriarcat œcuménique: les églises et les monastères* (Paris, 1953), 227–31, esp. 229 and 230. Stephen of Novgorod in G. P. Majeska, *Russian Travelers to Constantinople in the Fourteenth and Fifteenth Centuries* (Washington, DC, 1984), 44–5; Anselmo Banduri, *Imperium Orientale*, vol. 2, 40, cited in A. L. Frothingham, 'Notes on Christian mosaics. III. The lost mosaics of the East', *American Journal of Archaeology and of the History of the Fine Arts* 4.2 (1888), 127–48, at 135.
76. Cormack, 'The apse mosaics of S. Sophia at Thessaloniki', 128 and 131–2, on critics of the mosaic; eds. C. Bakirtzis et al., *Mosaics of Thessaloniki* (Athens, 2012), 292, argue for apse and dome alike as ninth century and the former as the work of a 'less-accomplished craftsman'.
77. P. Perdrizet and L. Chesnay, 'La métropole de Serres', *Monuments et mémoires: de la fondation Eugène Piot* 10 (1903), 123–44. We need to remember what they had to compare it to in 1903, which was rather less than we have now.
78. Eds. Fathers of the Holy and Great Monastery of Vatopaidi, *Great Monastery of Vatopaidi: Tradition – History – Art* (Mount Athos, 1998); C. Steppan, 'Die Mosaiken des Athosklosters Vatopaidi', *CahArch* 42 (1994), 87–112. The date of the Vatopedi mosaics has been placed anywhere between the eleventh and fourteenth centuries and the panels may come from different times. Six mosaic panels survive at Vatopedi, including a scene of the Annunciation, a Deesis over the west door and St Nicholas over the door to the parekklesion, whilst other mosaics may also have existed. How much mosaic there is on Athos, I don't know – as a woman, I cannot access the Holy Mountain and so I'm not going to worry about it.
79. For why the emperor was Constantine X see C. Mango, 'The date of the narthex mosaics of the Church of the Dormition at Nicaea', *DOP* 13 (1959), 245–52.
80. *Ibid*.
81. K. Bowes and J. Mitchell, 'The main chapel of the Durrës amphitheatre', *Mélanges d'archéologie et d'histoire de l'École française de Rome, antiquité* 121.2 (2009), 571–97.
82. O. Powstenko, *The Cathedral of St Sophia in Kiev* (New York, 1954), dates it to the 1040s, disagreeing with an earlier 1017 date; V. Lazarev, *Old Russian Murals and Mosaics* (London, 1966), 32, argues that the mosaic was started in 1043–46. A. Poppe, 'The building of the church of St Sophia in Kiev', *Journal of Medieval History* 7 (1981), 15–66, argues that it was done between 1037 and 1046. E. Boeck, 'Simulating the Hippodrome: the performance of power in Kiev's St Sophia', *Art Bulletin* 91 (2009), 283–301, points out that the date of foundation could be 1017, 1018 or 1037. Also on these mosaics, V. N. Lazarev, *Mozaiki Sofii Kievskoĭ* (Moscow, 1960) and G. N. Logvin, *Kiev's Hagia Sophia* (Kiev, 1971).
83. See the discussion in C. Raffensperger, *Reimagining Europe: Kievan Rus' in the Medieval World* (Cambridge, Mass., 2012).
84. *Russian Primary Chronicle*, yr. 6497, tr. in C. Mango, *Art of the Byzantine Empire: Sources and Documents* (Toronto, 1974), 221, though with no specific mention of mosaics. However, see S. H. Cross, H. V. Morgilevski and K. J. Conant, 'The earliest medieval churches of Kiev', *Speculum* 11 (1936), 477–99.
85. N. Kukovalska and A. Ostapchuk, 'The study and restoration of Kyiv mosaics (11th–12th centuries)', *Arte medievale* 3 (2013), 207–22.
86. Lazarev, *Old Russian Murals*, 42.
87. Kukovalska and Ostapchuk, 'Study and restoration of Kyiv mosaics', say that Levitskya calculated 9 million tesserae were needed, that the mosaics took three seasons (May to October) and that at least eight mosaicists were employed in the first two seasons and four in the last, but they give no details as to how these conclusions were arrived at.
88. Lazarev, *Old Russian Murals*, 61. For a dubious discussion of why the Eucharist of St Michael is inferior to that of Hagia Sophia see S. H. Cross, 'The mosaic Eucharist of St Michael's (Kiev)', *American Slavic and East European Review* 6 (1947), 56–61. O. Demus, *Byzantine Art and the West* (London, 1970), 121, for the third-rate mosaicists sent from Byzantium to Kiev.

89. V. N. Lazarev, 'Nouvelles découvertes dans la cathédrale de Ste-Sophie de Kiev', *ByzantinoSlavica* 19 (1958), 85–94, saw the mosaics as a collaboration between Greek and local artists.
90. Raffensperger, *Reimagining Europe*, 42, suggests the artists were second-rate because of poor pay, hard travel and worse conditions, an idea which makes at least two assumptions.
91. An obvious Renaissance example of sending out quality artists for the prestige this accrues being Lorenzo de' Medici sending Ghirlandaio and Botticelli, among others, to Rome.
92. Tr. M. Heppell, *The* Paterik *of the Kievan Caves Monastery* (Cambridge, Mass., 1989), Discourse 4, p. 11, for the Greek painters and merchants; Discourse 34, pp. 192–3 for the miraculous mosaic. Heppell's n.33 on pp. 9–10 records an entry for 1470 noting that the church once had mosaics on the walls and floor. Discourse 31 has the monk Proxor living on 'bread' from a plant called *lobeda* (atriplex or orach) and supplying salt from cinders (see Heppell's Introduction, xlvii–xlix) – this was a salty plant whose ashes tasted like salt so is it possible that it could have been used in glass-making?
93. Cross, 'The mosaic Eucharist of St Michael's'. The remains were lost in World War II.
94. Surviving pieces are illustrated in eds. H. C. Evans and W. D. Wixom, *The Glory of Byzantium* (New York, 1997), 289–92, and Stephen in eds. R. Cormack and M. Vassilaki, *Byzantium 330–1453* (London, 2008), 317 and 449.
95. P. A. Rappoport, *Building the Churches of Kievan Russia* (Aldershot, 1995), 177. Powstenko, *The Cathedral of St Sophia*, 1, records two Greek inscriptions on the plaster – possibly part of the underdrawing. V. N. Lazarev, *Michajlovskie Mosaici* (Moscow, 1966); I. O. Koreniuk, *Mozaiky Mykhailivs'koho Zolotoverkhoho Soboru* (Mosaics of St. Michael's Golden-Domed Cathedral) (Kiev, 2013), is a more recent publication that I have not been able to get hold of.
96. Lazarev, *Old Russian Murals*, 72.
97. *Ibid.* 74.
98. T. S. Noonan, 'Technology transfer between Byzantium and Eastern Europe: a case study of the glass industry in early Russia', in eds. M. J. Chiat and K. L. Reyerson, *The Medieval Mediterranean: Cross-cultural Contacts* (St. Cloud, MN, 1988), 105–11, discusses something of the tangled issues. Also Rappoport, *Building*, 85.
99. Lazarev, *Old Russian Murals*, 16.
100. *Ibid.* 16–18. Poppe 'The building of the church of St Sophia', on finds in Kiev of smalt.
101. Noonan, 'Technology transfer'. If materials were imported from Byzantium, they must have been in Kiev before July 1043 when the Rus' attack on Constantinople cut off sea traffic between Kiev and the empire.
102. H. Stern, 'Recherches sur la Mosquée al-Aqsa et sur ses mosaïques', *Ars Orientalis* 5 (1963), 27–47. Also K. A. C. Creswell, *Early Muslim Architecture*, vol. 1: *Umayyads, AD 622–750* (second edition, Oxford, 1969), part 2, 373–80.
103. O. Grabar, *The Shape of the Holy: Early Islamic Jerusalem* (Princeton, 1996), 120; J. M. Bloom, *Arts of the City Victorious: Islamic Art and Architecture in Fatimid North Africa and Egypt* (New Haven, 2007), 81–2, summarises the discussions of the dates.
104. Described by Nasir-i Khosraw: see Grabar, *The Shape of the Holy*, 152–5.
105. Bloom, *Arts of the City Victorious*, 83; also see Bloom's comments on the Fatimids and mosaics as something for Jerusalem rather than Cairo at 87.
106. See M. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque in Damascus', in Creswell, *Early Muslim Architecture*, vol. 1, part 1, 241–2; Grabar, *The Shape of the Holy*, 151, accepted this reading; also see Stern, 'Recherches sur la Mosquée al-Aqsa', 44.
107. Stern, 'Recherches sur la Mosquée al-Aqsa', 46. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 241–2, prefers tesserae to mosaicists.
108. R. Ousterhout, 'Rebuilding the Temple: Constantine Monomachos and the Holy Sepulchre', *Journal of the Society of Architectural Historians* 48 (1989), 66–78, saw the rebuilding as the work of two teams of masons, one from Constantinople and one from Jerusalem itself, operating independently and reusing materials, especially marbles. It was probably restored between 1042 and 1044, possibly in 1048 according to M. Biddle, *The Tomb of Christ* (Stroud, 1999). The date of the mosaic of the aedicule is unknown. In 1047, Nasir-i Khusraw described the Church of the Holy Sepulchre in terms that suggest mosaic, though he did not use this term: he said that the pictures were varnished in oil of sandarac and covered with fine transparent glass that did not block any of the painting. The text is quoted in D. Pringle, *The Churches of the Crusader Kingdom of Jerusalem: A Corpus,* vol. 3: *The City of Jerusalem* (Cambridge, 2007), 12, and Pringle goes on to discuss what may have been there. Whether these were mosaics restored by Constantine IX or earlier works is impossible to say.
109. Mango, 'The date of the narthex mosaics', 245.
110. A. Cutler 'Under the sign of the Deēsis: on the question of representativeness in medieval art and literature', *DOP* 41 (1987), 154.

11 INCORRIGIBLY PLURAL

1. E. Kitzinger, 'The mosaics of the Cappella Palatina in Palermo: an essay on the choice and arrangement of subjects', *Art Bulletin* 31 (1949), 269–92.

2. A. Cutler, 'The Christian wall paintings in the Parthenon: interpreting a lost monument', *Deltion tes Christianikes Archaiologikes Etaireias* 17 (1993), 171–80. In 1848, the British Museum acquired 188 coloured and gold tesserae supposedly from the Parthenon from Thomas Burdon, a long-time resident in Greece.
3. A. Eastmond, *Royal Imagery in Medieval Georgia* (Philadelphia, 1998), 58–67; L. Khuskivadze, *The Mosaic of Gelati* (Tbilisi, 2005); L. Khuskivadze, 'La mosaïque de Guélati', *Arte medievale* 3 (2013), 223–36.
4. T. Whittemore, *The Mosaics of Haghia Sophia at Istanbul: Third Preliminary Report, 1935–1938: The Imperial Panels of the South Gallery* (Oxford, 1942), saw the image as made in two phases, with John and Eirene celebrating their accession in 1118 and Alexios added in 1122, commemorating his elevation as co-emperor. H. Kähler and C. Mango, *Haghia Sophia* (London, 1967), 58, suggest the panel is all of a piece and date it to *c.* 1122.
5. R. Ousterhout, Z. Ahunbay and M. Ahunbay, 'Study and restoration of the Zeyrek Camii in Istanbul, second report, 2001–2005', *DOP* 63 (2009), 535–56, report that thousands of tesserae came up in the mortar from the eighteenth-century restoration. Plate 21 shows gold, red, blue and 'black' tesserae. In areas of the rubble fill, there were also fragments of setting plaster with the tesserae still attached. Many of the tesserae had rounded edges, and on the edge of some pieces of gold tesserae the gold leaf did not extend to the outer border and was overlain by a thin layer of glass all the way to the end, providing evidence of the way in which these were made. The *typikon* of the Pantokrator (tr. R. Jordan in eds. J. Thomas and A. C. Hero, *Byzantine Monastic Foundation Documents: A Complete Translation of the Surviving Founders' Typika and Testaments* (Washington, DC, 2000), vol. 2, 754) records the existence of scenes from Christ's life that could have been made from mosaic.
6. For the Holy Apostles, see Nikolaos Mesarites, *Description of the Church of the Holy Apostles at Constantinople*, ed. and tr. G. Downey, *Transactions of the American Philosophical Society* 47.6 (1957), 855–924. For twelfth-century mosaics at the Chora, see R. Cormack, 'The talented Mr Hawkins', in eds. H. A. Klein, R. G. Ousterhout and B. Pitarakis, *Kariye Camii yeniden/The Kariye Camii Reconsidered* (Istanbul, 2011), 506. For the Odalar Camii, though every other reference I have come across is to fresco, S. Eyice, 'İstanbul'un Ortadan Kalkan Bazı Tarihi Eserleri', *Tarih Dergisi* 27 (1973), 133–78, at 175, apparently says that mosaics were still extant in 1916 when viewed by Dalleggio d'Alessio.
7. These are recorded in a series of epigrams in Codex Marcianus Graecus 524 and Foteine Spingou generously shared her as yet unpublished research on these with me: F. Spingou, 'Text and image at the court of Manual Komnenos: epigrams on works of art in Marcianus Graecus 524' (masters thesis, University of Oxford, 2010) and 'Words and artworks in the twelfth century and beyond: the thirteenth-century manuscript Marcianus Graecus 524 and the twelfth-century dedicatory epigrams on works of art' (doctoral thesis, University of Oxford, 2012). Some are translated in C. Mango, *Art of the Byzantine Empire: Sources and Documents* (Toronto, 1974), 225–8. Also see P. Magdalino, 'Manuel Komnenos and the Great Palace', *Byzantine and Modern Greek Studies* 4 (1978), 101–14.
8. For this moving of mosaics, specifically of the Archangel Michael, see Niketas Choniates, *History*, ed. I. Bekker, *Nicetae Choniatae Historia* (Bonn, 1835), 580; ed. I. A. van Dieten, *Nicetae Choniatae Historia* (Berlin and New York, 1975). I have no idea how or why or whether this was common practice.
9. P. Magdalino and R. Nelson, 'The emperor in Byzantine art of the twelfth century', *Byzantinische Forschungen* 8 (1982), 123–83.
10. Ed. and tr. E. Panofsky, *Abbot Suger on the Abbey Church of St.-Denis and its Art Treasures* (Princeton, 1979), ch. 27 at 47; for Aachen, see U. Wehling, *Die Mosaiken im Aachener Münster und ihre Vorstufen* (Cologne and Bonn, 1995).
11. O. Demus, *The Mosaics of Norman Sicily* (London, 1949), 371.
12. It was destroyed by fire and rebuilt in the eighteenth century. A fragment of mosaic is in the Museo della Cattedrale in Ferrara: see cat. entry 19 on p. 165 and the illustration on p. 66 in ed. G. Caputo and G. Gentili, *Torcello: alle origini di Venezia tra Occidente e Oriente* (Venice, 2009); also F. Flores D'Arcais, 'Testa della Vergine', in ed. F. Flores D'Arcais, *La forma del colore: mosaici dall'antichità al XX secolo. Catalogo della Mostra* (Rimini, 1999), 173–4; P. Angiolini Martinelli, 'Un frammento della decorazione musiva dell'antico Duomo di Ferrara', *Bolletino annuale dei musei ferraresi* 5/6 (1975–76), 211–14.
13. H. L. Kessler, 'Una chiesa magnificamente ornata di pitture', in ed. E. Fabbricatore, *San Nilo: il monastero italo-bizantino di Grottaferrata, 1004–2004: mille anni di storia, spiritualità e cultura* (Rome, 2005), 73–90, at 77, for who suggested Sicily and why this is not convincing.
14. See R. B. J. Mason's website, *Middle Eastern Pottery in Italy and Europe*, www.utoronto.ca/nmc/mason/italy.html (consulted 4 March 2014). B. Cussino, M. Guida, C. Saratti and C. Zacutti, 'I mosaici medioevale di Ravello', *Quaderni dell'Istituto di storia dell'architettura di Università di Roma* 19 (1957), 1–10, for a description of the pulpits at Ravello.
15. Fragments are in the Museo Archeologico in Ravenna. I. Andreescu-Treadgold, 'I primi mosaici a San Marco', in ed. R. Polacco, *Storia dell'arte marciana: i mosaici* (Venice 1997), 87–104; D. M. Deliyannis, *Ravenna in Late Antiquity* (Cambridge, 2010), 85–6; M. Verhoeven, *The Early Christian Monuments of Ravenna: Transformation and Memory* (Turnhout, 2011), 109–12, makes the case that the mosaic work in Ravenna was the work of non-reformists, notably Archbishop Jeremy – so both Reform and non-reform ecclesiastics used mosaic for their own purposes.

16. Deliyannis, *Ravenna*, 267; I. Andreescu-Treadgold, 'The emperor's new crown and St Vitalis' new clothes', *Corso di cultura sull'arte ravennate e byzantine* 41 (1994), 149–86.
17. Demus' culminating study is *The Mosaics of San Marco in Venice*, 2 vols. in 4 (Chicago, 1984). Volume 1 deals with the eleventh and twelfth centuries, volume 2 covers the thirteenth century, and there is an accompanying volume of plates for each. For a critique of Demus, see S. Sinding-Larsen, 'A walk with Otto Demus. The mosaics of San Marco, Venice and art-historical analysis', *ActaNorv* 8 (1992), 145–205.
18. See Demus, *The Mosaics of San Marco*, vol. 1, ch. 1.
19. *Ibid.* 3.
20. *Ibid.* 116 and 124, where Demus suggests that the scenes may have been taken from a Byzantine manuscript.
21. Sinding-Larsen, 'A walk with Otto Demus', esp 160. Sinding-Larsen suggests that there is much more of Rome in the S. Marco mosaics than Demus allowed.
22. M. Muraro, 'Il Pilastro del Miracolo e il secondo programme dei mosaici Marciani', *Arte Veneta* 29 (1975), 60–5.
23. Demus, *The Mosaics of San Marco*, vol. 1, 253.
24. *Ibid.* 109–14: 'disappointing' and 'unsatisfactory'; produced by 'mediocre craftsmen who belonged to the fringe of the "local workshop"'.
25. J. Osborne, 'The hagiographical programme of the mosaics of the south dome of San Marco at Venice', *RACAR* 22 (1995), 19–28. On a similar theme in the north and south choir chapels, see L. Jessop, 'Art and the Gregorian reforms: Sts Peter and Clement in the church of San Marco at Venice', *RACAR* 32 (2007), 24–34.
26. On this topic see the discussion of D. Jacoby, 'Les Vénitiens naturalisés dans l'empire byzantine: un aspect de l'expansion de Venise en Romanie du XIII au milieu du XV siècle', *Travaux et mémoires* 8 (1981), 217–35.
27. Osborne, 'The hagiographical programme'; T. E. A. Dale, 'Inventing a sacred past: pictorial narratives of St Mark the Evangelist in Aquileia and Venice c1000–1300', *DOP* 48 (1994), 53–102; D. Pincus, 'Venice and the two Romes: Byzantium and Rome as a double heritage in Venetian cultural politics', *Artibus et historiae* 26 (1992), 101–14.
28. Fortini Brown, *Venice and Antiquity*, 15; P. Fortini Brown, 'Acquiring a classical past. Historical appropriation in Renaissance Venice', in eds. A. Payne, A. Kuttner and R. Smick, *Antiquity and its Interpreters* (Cambridge, 2000), 27–39. For the Islamic world, D. Howard, *Venice and the East: The Impact of the Islamic World on Venetian Architecture 1100–1500* (New Haven, 2000); D. Howard, 'Venice as an "Eastern" city', in ed. S. Carboni, *Venice and the Islamic World 828–1797* (New Haven, 2006), 58–71.
29. I. Andreescu, 'Torcello III. La chronologie relative des mosaïques pariétales', *DOP* 30 (1976), 245 + 247–341; also four heads of apostles on the right half of the apse mosaic.
30. Demus, *The Mosaics of San Marco*, vol. 1, 125–40.
31. Compared by Demus, *ibid.* 146, to S. Marco. Demus suggests that the Murano mosaic may precede S. Marco and argues that the Torcello Virgin and the Murano Virgin were the work of two different artists.
32. W. Oakeshott, *The Mosaics of Rome: From the Third to the Fourteenth Centuries* (London, 1967), 243, suggests Byzantine masters.
33. See Andaloro/Romano C4, 191–5.
34. Oddly enough, most discussion has centred on the Mithraeum and early church rather than the twelfth-century building, for which see J. E. Barclay Lloyd, 'The building history of the medieval church of S. Clemente in Rome', *Journal of the Society of Architectural Historians* 45 (1986), 197–223, and J. Barclay Lloyd, *The Medieval Church and Canonry of San Clemente in Rome* (Rome, 1989).
35. Barclay Lloyd, 'The building history', 203. Also see the discussion of S. Clemente and its mosaic by H. Kessler and J. Zacharias, *Rome 1300: On the Path of the Pilgrim* (New Haven, 2000), 72–89. At S. Clemente, Cardinal Anastasius buried the old church which had just been redecorated with large-scale murals by Beno da Rapiza and his wife Maria 'the butcher'. Kessler and Zacharias suggest that this sort of 'middle-class' commercial lay patronage was happening on an increasing scale in Rome – as the economy grew, so too did the wealth of this sort of person. The existence of these relatively modest churches needs to be remembered in the context of discussions of the buildings and patronage of cardinals and popes.
36. Barclay Lloyd, 'The building history', 204.
37. Andaloro/Romano A1, 167–90; Andaloro/Romano C4, 209–18, giving the size at 210. For debates, see Barclay Lloyd, 'The building history', 220–2. For this date, see J. E. Barclay Lloyd, 'A new look at the mosaics of San Clemente', in eds. A. Duggan, J. Greatrex and B. Bolton, *Omnia disce: Medieval Studies in Memory of Leonard Boyle OP* (Aldershot, 2005), 9–27.
38. Oakeshott, *The Mosaics of Rome*, 248.
39. S. Riccioni, *Il mosaico absidale di S. Clemente a Roma: exemplum della chiesa riformata* (Spoleto, 2006), links it to works of reform theologians including Peter Damian; he sees different 'styles' within the mosaic as highlighting areas to give a different reading of the iconography. Also see C. Wickham, *Medieval Rome: Stability and Crisis of a City, 900–1150* (Oxford, 2015), 353. H. Toubert, 'Le renouveau paléochrétien à Rome au début du XIIe siècle', *CahArch* 20 (1970), 99–154, is important on ideas of Early Christian renewal and Reform. H. G. Thümmel, 'Das Apsismosaik von San Clemente in Rom', in eds. F. Guidobaldi and A. G. Guidobaldi, *Ecclesiae Urbis: Atti del Congresso internazionale di studi sulle chiese di Roma (IV–X secolo)* (Vatican City, 2002), 1725–38; G. Basile, 'Il mosaico absidale di S. Clemente a Roma', in eds. E. Borsook, F. Gioffredi Superbi and G. Pagliarulo, *Medieval Mosaics: Light, Color, Materials* (Milan, 2000), 149–55.

40. M. Stroll, 'The twelfth-century apse mosaic in San Clemente in Rome and its enigmatic inscription', *Storia e civiltà* 4 (1998), 3–17, argues for it as about reform and for the Petrus as Peter of Pisa; made again in M. Stroll, *Symbols as Power: The Papacy Following the Investiture Contest* (Leiden, 1991), ch. 9; Barclay Lloyd, 'A new look', argues that the timings do not match.
41. Barclay Lloyd, 'The building history', 220 and n.104.
42. D. Kinney, 'Rome in the twelfth century: *urbs fracta* and *renovatio*', *Gesta* 45 (2006), 199–220. Kitzinger, 'The arts as aspects of a renewal'.
43. For the façade, Andaloro/Romano C5, 72–6. One of the women may also be thirteenth century: Andaloro/Romano C5, 311.
44. Andaloro/Romano C4, 305–11. Oakeshott, *The Mosaics of Rome*, 254, wondered if Christ and the Virgin were by a different hand from the rest of the mosaic – more 'Byzantinising' (i.e. better!), perhaps?
45. M. Andaloro and S. Romano discuss it in 'L'immagine nelle abside', in *Arte e iconografia a Roma: da Costantino a Cola di Rienzo* (Milan, 2000); also discussed in eds. M. Andaloro and S. Romano, *La pittura medievale a Roma, 312–1431*, vol. 4, ed. S. Romano, *Riforma e tradizione, 1050–1198* (Milan, 2006), 305–11. E. Kitzinger, 'A Virgin's face: antiquarianism in twelfth-century art', *Art Bulletin* 62 (1980), 6–19.
46. For S. Maria in Monticelli, Andaloro/Romano C4, 312–14, dating it to *c.* 1143.
47. Andaloro/Romano C4, 335–43, with 344–5 on the possibly mosaic façade of the church. Oakeshott, *The Mosaics of Rome*, 250–5, wanted S. Francesca Romana to be earlier so that its 'less-good' mosaics could influence S. Maria in Trastevere, rather than the other way round. J. Gardner, *The Roman Crucible: The Artistic Patronage of the Papacy, 1198–1304* (Munich, 2013), 226, described the figures as 'wooden'. J. Snyder, 'The mosaic in Sta Maria Nova and the original apse decoration of Sta Maria Maggiore', in eds. R. Engass and M. Stokstad, *Hortus Imaginum* (Lawrence, KS, 1974), 1–10, suggests that the original apse of S. Maria Maggiore can be reconstructed from this mosaic: this seems unlikely. Wickham, *Medieval Rome*, 300, argues that it is possible that the pope was not the patron since the mosaic makes no reference to him, and suggests that the mosaic could be linked to the influence of the Frangipane family. Also see U. Nilgen, 'Maria Regina – ein politischer Kultbildtypus?', *Römisches Jahrbuch für Kunstgeschichte* 19 (1981), 3–33.
48. Oakeshott, *The Mosaics of Rome*, 254, who also thinks it very likely that the now-lost mosaics of S. Andrea in Catabarbara (468–83) served as a model.
49. For the head of *Ecclesia* see A. Iacobini, 'Est haec sacra principis aedes. The Vatican basilica from Innocent III to Gregory IX (1198–1241)', in ed. W. Tronzo, *St Peter's in the Vatican* (Cambridge, 2005), 48–63.
50. Oakeshott, *The Mosaics of Rome*, 256, sees them as more Byzantinising than anything else in the twelfth-century, comparing them to those supposedly unproblematically Byzantine mosaics of Torcello and Murano.
51. Kinney, 'Rome in the twelfth century'. Also S. Twyman, *Papal Ceremony at Rome in the Twelfth Century* (Woodbridge, 2002).
52. For Innocent, see *The Deeds of Pope Innocent III by an Anonymous Author*, tr. J. M. Powell (Washington, DC, 2004), 260. I. Herklotz, 'Die Beratungsräume Calixtus' II. im Lateranpalast und ihre Fresken Kunst und Propaganda am Ende des Investiturstreits', *Zeitschrift für Kunstgeschichte* 52 (1989) 145–214. W. Tronzo, 'Setting and structure in two Roman wall decorations of the early Middle Ages', *DOP* 41 (1987), 489–92, suggests that Celestine III's (1191–98) construction of the ciborium for Veronica's Veil may have led to further mosaic work in the Oratory of John VII. A. van Dijk, 'Jerusalem, Antioch, Rome and Constantinople: the Peter Cycle in the Oratory of Pope John VII (705–707)', *DOP* 55 (2001), 305–28, explores the case for and against in detail, concluding that the mosaics in the Oratory were more probably all eighth century.
53. Andaloro/Romano C4, 372. C. Walter, 'Papal political imagery in the medieval Lateran palace' [part 1], *CahArch* 20 (1970), 155–76, and 'Papal political imagery in the medieval Lateran palace' [part 2], *CahArch* 21 (1971), 109–36, for a detailed discussion.
54. Demus, *The Mosaics of Norman Sicily*, 187–92; M. J. Johnson, 'The lost royal portraits of Gerace and Cefalù cathedrals', *DOP* 53 (1999), 237–62; G. Bernardi, 'I mosaici del duomo di Messina: storia e vicende conservative', in eds. F. Guidobaldi and A. Paribeni, *AISCOM* 6 (Ravenna, 2001), 439–50, and 'I mosaici del duomo di Messina: nuovi documenti sui restauri', *AISCOM* 6 (Ravenna, 2001), 595–608, on damages and conservations.
55. D. Matthew, *The Norman Kingdom of Sicily* (Cambridge, 1992); D. Abulafia, *The Two Italies: Economic Relations between the Norman Kingdom of Sicily and the Northern Communes* (Cambridge, 1977).
56. Demus, *The Mosaics of Norman Sicily*, 73–90; E. Kitzinger, *The Mosaics of St. Mary's of the Admiral in Palermo* (Washington, DC, 1990); W. Tronzo, *The Cultures of his Kingdom: Roger II and the Cappella Palatina in Palermo* (Princeton, 1997); ed. B. Brenk, *La Cappella Palatina a Palermo* (Modena, 2010), 4 vols. A. Acconcia Longo, 'Considerazioni sulla chiesa di S. Maria dell'Ammiraglio e sulla Cappella Palatina di Palermo', Νέα Ρωμη 4 (2007), 267–93, presents an important article in this debate, looking to offer dates on the basis of the documentary evidence rather than the style of the mosaics.
57. E. Borsook, *Messages in Mosaic: The Royal Programmes of Norman Sicily, 1130–1187* (Oxford, 1990), 17.
58. Demus, *The Mosaics of Norman Sicily*, 28.
59. Demus, *The Mosaics of Norman Sicily*, 40, on lines of viewing. Also Borsook, *Messages in Mosaic*, ch. 3.
60. Demus, *The Mosaics of Norman Sicily*, 36
61. *Ibid.* 47.
62. *Ibid.* 50 and 52 on the placing of the Virgin.

63. *Ibid.* 47; Tronzo, *The Cultures of his Kingdom*, thinks Roger, William I and William II were all involved in the mosaics, and argues that two separate spaces, a Byzantine chapel and an Islamic audience hall, were transformed into one building.
64. B. Brenk, 'I volti delle boteghe byzantine. Nuove osservazioni e conclusioni sulle tecniche dei mosaicisti nelle Cappella Palatina di Palermo', *Arte medievale* 3 (2013), 237–56; J. Johns 'The date of the ceiling of the Cappella Palatina in Palermo', in eds. E. J. Grube and J. Johns, *The Painted Ceilings of the Cappella Palatina* (Genoa, 2005), 1–14, dates the building and the ceiling painting to *c.* 1140–*c.* 1147.
65. W. Tronzo, 'The medieval object-enigma and the problem of the Capella Palatina in Palermo', *Word and Image* 9 (1993), 197–228; Kitzinger, 'The mosaics of the Cappella Palatina', about it as a kingly space.
66. Kitzinger, 'The mosaics of the Cappella Palatina' and, building on this, Tronzo, *The Cultures of his Kingdom*.
67. B. Brenk, 'La parete occidentale della Capella Palatina a Palermo', *Arte medievale* 4 (1990), 135–50, arguing for the west wall as a unified building campaign and the mosaic as making reference to Rome.
68. Tronzo, *The Cultures of his Kingdom*; Kitzinger, 'The mosaics of the Cappella Palatina'; Borsook, *Messages in Mosaic.*
69. Grube and Johns, *The Painted Ceilings of the Cappella Palatina*.
70. Demus, *The Mosaics of Norman Sicily*, 195, on the chapel's signifiance. For Cairo, L.-A. Hunt, 'Ceiling and casket at the Cappella Palatina and Christian Arab art between Sicily and Egypt in the twelfth and thirteenth centuries', in ed. D. Knipp, *Siculo-Arabic Ivories and Islamic Painting 1100–1300* (Munich, 2011), 169–98, suggesting cultural affiliations with Christian Egyptians.
71. Johnson, 'The lost royal portraits of Gerace'; Demus, *The Mosaics of Norman Sicily*, 187–9.
72. Borsook, *Messages in Mosaic.*
73. Kitzinger, *The Mosaics of St. Mary's*, 21 and the account of Ibn Jubayr in 1184.
74. Demus, *The Mosaics of Norman Sicily*, 196.
75. See S. Ćurčić, 'The architecture', in Kitzinger, *The Mosaics of St. Mary's*, 27–68.
76. *Ibid.* 39–41.
77. Kitzinger, *The Mosaics of St. Mary's*, 105; also see the review of the book by Valentino Pace in *Speculum* 69 (1994), 816–18.
78. The image of Roger is usually compared to a tenth-century ivory panel now in the Pushkin Museum, Moscow, depicting the Byzantine emperor Constantine VII Porphyrogenitos rather than to the twelfth-century mosaic image of John II Komnenos in Hagia Sophia.
79. A. Cutler, 'Under the sign of the deesis', *DOP* 41 (1987), P, for the relationship between this mosaic and the scene of the Deesis.
80. Kitzinger, *The Mosaics of St. Mary's*, 206.
81. E. Kitzinger, 'Mosaic decoration in Sicily under Roger II and the classical Byzantine system of church decoration', in ed. Tronzo, *Italian Church Decoration*, 147–65.
82. Kitzinger, *The Mosaics of St. Mary's*, 84, suggests Greek workmen, sticking together.
83. E. Kitzinger, 'Two mosaic ateliers in Palermo in the 1140s', in ed. X. Barral i Altet, *Artistes, artisans et production artistique au moyen âge*, 3 vols. (Paris, 1986–90), vol. 1, 277–89, and *The Mosaics of St. Mary's*, but see Pace's review in *Speculum* 69 (1994), 816–18 and Acconcia Longo, 'Considerazioni sulla chiesa', 267–93, for alternatives.
84. On the cathedral, G. Samonà, *Il Duomo di Cefalù* (Rome, 1940); H. Schwartz, 'Die Baukunst Kalabriens und Siziliens im Zeitalter der Normannen', *Römisches Jahrbuch für Kunstgeschichte* 6 (1942–44), 1–112, arguing for it as a work of Roger II abandoned in 1154 and completed in the late twelfth century; M. Andaloro, 'I mosaici di Cefalù dopo il restauro', *III Colloquio internazionale sul mosaico antico: Ravenna, 6–10 settembre 1980* (Ravenna, 1984), 105–16. Demus, *The Mosaics of Norman Sicily*, 14–18, dates the apse to Roger in 1148 and the mosaics in the choir vault to William I in the 1170s. Demus saw Cefalù as a pure and up-to-date example of Byzantine court art, comparable to Daphni, but was less clear about where the Cappella Palatina and Martorana fitted in. Kitzinger's review of *Mosaics of Norman Sicily* (*Speculum* 28 (1953), 143–50) suggested that Demus omitted a lot of detail. Kitzinger saw the Martorana as dating to the same time as Cefalù but the work of a different workshop, and that all the mosaics dated to Roger II. But both Demus and Kitzinger agreed that the mosaic was a straight import from Byzantium and was neither Islamic nor from Monte Cassino. For Monreale, Kitzinger agreed that Demus showed that the style was new and Byzantine, but defined it as 'provincial'. It all underlines the inconclusive and haphazard nature of style analysis.
85. Demus, *The Mosaics of Norman Sicily*, 10, suggesting thirteenth-century mosaic additions.
86. On the south side, the upper level consists of Abraham with David and Solomon; below are Jonah, Micah, Nahum; the lowest level consists of four Greek holy warriors and four Greek Fathers. On the north side, Melchizedek is in a medallion at the top, flanked by Hosea and Moses; below are Joel, Amos, Obadiah, and below them four holy deacons and four Western Fathers.
87. Johnson, 'The lost royal portraits of Gerace'.
88. V. N. Lazarev, 'The mosaics of Cefalù', *Art Bulletin* 17 (1935), 184–232: a single master *c.* 1148.
89. Demus, *The Mosaics of Norman Sicily*, 180–16; E. Kitzinger, 'The mosaic fragments in the Torre Pisana of the Royal Palace in Palermo: a preliminary study', in *Mosaïque: recueil d'hommages à H. Stern* (Paris, 1983), 239–43. Also the discussion in E. R. Hoffman, 'Pathways of portability: Islamic and Christian interchange from the tenth to the twelfth century', *Art History* 24 (2001), 17–50.
90. Kitzinger, 'The mosaic fragments in the Torre Pisana'.
91. Although Demus, *The Mosaics of Norman Sicily*, 178–80, sees similarities with the mosaics of the Cappella Palatina and Monreale and suggests that they date to the start of

the reign of William II, and that one of the masters then went on to work at Monreale, he does not suggest that the artists were Byzantine.

92. R. Pococke (travelling 1737), *Pococke's Travels in Egypt*, in ed. J. Pinkerton, *A General Collection of the Best and Most Interesting Voyages and Travels in all Parts of the World*, XV (London: Longman and others, 1814), 190, recorded that 'At the west of the castle [this seems to be Saladin's citadel of Cairo] are remains of very grand apartments, some of them covered with domes, and adorned with mosaic pictures of trees and houses, that doubtless belonged to ancient sultans, and it is said have since been inhabited by the Pashas.'
93. Similar star patterns to those in the Martorana are visible in S. Marco in Venice: see Demus, *The Mosaics of San Marco*, vol. 2, image 17.
94. Ćurčić, 'The architecture', 58.
95. Hunt, 'Ceiling and casket at the Cappella Palatina'.
96. A. Metcalfe, *Muslims and Christians in Norman Sicily* (London, 2003), suggests that the kings appear to have known Arabic rather than Greek.
97. Borsook, *Messages in Mosaic*, 53, for 6,318 square metres. S. Brodbeck, 'Le chantier de décor en mosaïque de la cathédrale de Monreale', *Arte medievale* 3 (2013), 271–86, gives 7,600 square metres.
98. Demus, *The Mosaics of Norman Sicily*, 112–48, describes what is where.
99. Borsook, *Messages in Mosaic*, 56.
100. E.g. by Demus, *The Mosaics of Norman Sicily*. Brodbeck, 'Le chantier du décor', points out that the organisation of work at Monreale is little studied and less understood. She makes the point that the restoration work does not suggest different chronologies so much as different artists working at the same time in the same restricted space. She dates the apse to the 1170s and the transept to the early 1180s.
101. Demus, *The Mosaics of Norman Sicily*, 135, discusses how this workshop might have worked; 145 for model books; 147 on how many workmen for how long and problems of getting colours at the last.
102. Brodbeck, 'Le chantier de décor', argues that the iconographic choices made were those of William II, but that it unlikely there was one guiding plan; R. Bacile, 'Stimulating perceptions of kingship: royal imagery in the Cathedral of Monreale and in the church of Santa Maria dell'Ammiraglio in Palermo', *Al-Masaq* 16 (2004) 17–52, is keen on Kitzinger and his association of the 'programme' with the 'Feast Cycle'. Also Johnson, 'The lost royal portraits of Gerace'.
103. Demus, *The Mosaics of Norman Sicily*, 187–9.
104. L. M. Evseeva, 'Liturgical drama as a source of the Monreale mosaics', *Series Byzantine* 8 (2010), 67–84.
105. This is a key argument in Borsook, *Messages in Mosaic*, e.g. at xxiii. She suggests that the emphasis on light could have come from Saint-Denis and points out (39) the considerable use of Latin rather than Greek in inscriptions.
106. Ed. J. Turner, *The Grove Dictionary of Art* (Basingstoke, 1986), vol. 26, 653, sv 'Romanesque', section IV, 1 (ii)(b): wall painting: stylistic development, after *c.* 1130.
107. Demus, *The Mosaics of San Marco*, vol. 1, 25–7 and ch. 20.
108. *Ibid.*, esp. ch. 18, notably 247–53, and ch. 20. For assorted stylistic analyses of the mosaics: R. Polacco, 'Lo stile dei mosaici medievali di Venezia', in ed. C. Rizzardi, *Venice e Bisanzio: aspetti della cultura artistica bizantina da Ravenna a Venezia (V–XIV secolo)* (Venice, 2005), 458–9 (H. Loukas and Kiev); C. Rizzardi, *Mosaici altoadriatici: il rapporto artistico Venezia–Bisanzio–Ravenna in età medievale* (Ravenna, 1985), 37 (Nikaea and Nea Moni); D. Howard, *Venice and the East* (Cambridge, Mass., 2000), 83 (the Dome of the Rock); Demus, *The Mosaics of San Marco*, vol. 1, 288–9 (Kurbinovo); V. Djurić, 'I mosaici della chiesa di San Marco e la pittura serba del XIII secolo', in ed. R. Polacco, *Storia dell'arte marciana: i mosaici* (Venice, 1997), 185–94 (Serbian associations); I. Furlan, 'Aspetti di cultura greca a Venezia nell'XI secolo. La scuola Salonicco e lo stilo monumentale protocomneno', *Arte Veneta* 29 (1975), 28–37 (the place of the mosaics in Komnenian art). Also I. Andreescu-Treadgold, 'I primi mosaicisti a San Marco', in ed. Polacco, *Storia dell'arte*, 87–104. For stylistic comparisons within Italy, see, for example, C. Rizzardi, 'I mosaici parietali del XII secolo di Ravenna, Ferrara e San Marco a Venezia: relazioni ideologiche e artistiche', in ed. Polacco, *Storia dell'arte*, 123–34.
109. Demus, *The Mosaics of San Marco*, vol. 1, 2–5; his comments at 254–5 under the heading 'Problems of transmission'; 274–7, his comments in ch. 20, where style tends to feature as something organic in itself and detached from practitioner; and his remarks at 291–2 where he engages directly with the question of mosaicists; and vol. 2, 208–9, 220–2; O. Demus, *The Church of San Marco in Venice* (Washington, DC, 1966), 26. Also see O. Demus, *Byzantine Art and the West* (London, 1970), ch. 4, 'Colonial art', 121–62. For a contrasting position, L. James, 'Mosaic matters. Questions of manufacturing and mosaicists in the mosaics of San Marco, Venice', in eds. H. Maguire and R. S. Nelson, *San Marco, Byzantium and the Myths of Venice* (Washington, DC, 2010), 227–43.
110. Demus, *The Mosaics of San Marco*, vol. 2, 215–18.
111. Demus, *The Mosaics of Norman Sicily*, 375–7. The mosaics of the upper tier in the nave of the Cappella Palatina are 'more "classical", the poses more statuesque and the modelling more continuous' than those of the lower level and so 'it is not unlikely that the beginning was made by Greek masters'. At Cefalù, because the figures are 'slightly harder' in the modelling, they may be later: *ibid.* 55–7.
112. This is true both in the 1949 article, 'The mosaics of the Cappella Palatina in Palermo: an essay on the choice and arrangement of subjects', *Art Bulletin* 31 (1949), 269–92, and in the book of 1990, *The Mosaics of St. Mary's*,

where see for example 125 for the dome of the Martorana and its relationship to the painted dome of a church in Megara, Attika. Kitzinger saw Norman Sicily both as a source of evidence for Byzantine influence on Western art in the twelfth century and as a way of reconstructing lost art from Byzantium.

113. Kitzinger, 'The mosaics of the Cappella Palatina'; E. Kitzinger, 'Mosaic decoration in Sicily under Roger II and the classical Byzantine system of church decoration', in ed. W. Tronzo, *Italian Church Decoration of the Middle Ages and Early Renaissance: Functions, Forms and Regional Traditions* (Bologna, 1989), 147–65, argues that the Cappella Palatina, Martorana and Cefalù interpret the classic schema in different ways with three different teams of craftsmen imported from Byzantium.
114. Kitzinger, *The Mosaics of St. Mary's*; Demus, *The Mosaics of Norman Sicily*, 375.
115. Kitzinger, 'Two mosaic ateliers', argues for three distinct workshops, all imported from Constantinople within a five- to six-year period.
116. For Venice, see, for example, Demus in *The Mosaics of San Marco* and also his comments in *Byzantine Art and the West*. For Sicily, in addition to Demus' own work on the mosaics, notably *The Mosaics of Norman Sicily*, see Kitzinger, *The Mosaics of St. Mary's*. On Byzantine artists in Sicily, also see Rizzardi, *Mosaici altoadriatici*; M. Andaloro, 'Mosaici di Venezia e mosaici della Sicilia normanna', in ed. Polacco, *Storia dell'arte*, 105–22. For Byzantine influences in Roman mosaics in the same period, see G. Matthiae, *Mosaici medioevali delle chiese di Roma* (Rome, 1967); Oakeshott, *The Mosaics of Rome*; Nordhagen, 'Byzantium and the West'. Demus, *The Mosaics of San Marco*, vol. 1, 292–3, on the independent nature of the mosaic 'schools' of Sicily and Venice and the 'peculiar lifelessness' of twelfth-century Roman mosaics.
117. Demus, *The Mosaics of Norman Sicily*, 372.
118. See *ibid.* 370 and 371. Demus takes Byzantine mosaicists as a given and his analysis of style and iconography starts from this position. His mention of materials, 147, suggests that these were probably imported from Byzantium. Kitzinger also starts from the same basic premise: see, for example, *The Mosaics of St. Mary's*. Tronzo, *The Cultures of his Kingdom*, takes a more nuanced approach to Sicilian art, though with no special consideration of mosaics.
119. E. Kitzinger, 'The first mosaic decoration of Salerno cathedral', *Jahrbuch der österreischischen Byzantinistik* 21 (1972), 149–62; Kitzinger, 'The Gregorian reform and the visual arts'; Riccioni, *Il mosaico absidale di S. Clemente*; S. Riccioni, 'The word in the image: an epiconographic analysis of the mosaics of the Reform in Rome', *ActaNorv* 24 (2011), 85–137. E. Kitzinger, 'The arts as aspects of a Renaissance: Rome and Italy', in eds. R. L. Benson and G. Constable, *Renaissance and Renewal in the Twelfth Century* (Cambridge, Mass., 1982), 637–70.
120. Demus, *The Mosaics of Norman Sicily*, 371.
121. *Ibid.*
122. *Ibid.*
123. Demus, *The Mosaics of San Marco*, vol. 1, 114, 174: this 'latest' in Constantinopolitan mosaics is the by no means certain mosaic of the Ascension hypothesised as being in the Holy Apostles, Constantinople.
124. *Ibid.* 16; Lazarev, 'The mosaics of Cefalù', prefers a single master.
125. Demus, *The Mosaics of San Marco*, vol. 1, 292.
126. Oakeshott, *The Mosaics of Rome*, 295–7; Demus, *The Mosaics of San Marco*, vol. 2, 224. Polacco, 'Lo stile dei mosaici', sees them as the work of Venetian mosaicists in a Constantinopolitan style and the head of *Ecclesia* as rubbish. Oakeshott, *The Mosaics of Rome*, 256, sees *Ecclesia* as the work of Byzantine artists; Demus, *The Mosaics of Norman Sicily*, 454, and *The Mosaics of San Marco*, vol. 2, 223; Gandolfo, 'La pittura medievale'.
127. Demus, *Byzantine Art and the West*, 121.
128. Demus, *The Mosaics of Norman Sicily*, 391; Khuskivadze, *The Mosaic of Gelati*. Demus, *The Mosaics of Norman Sicily,* 371, on 'coarse' local mosaic figures in St Michael's Monastery, Kiev.
129. See Demus, *The Mosaics of San Marco*, vol. 1, 287 and vol. 2, chs. 8 and 9, for example 210, where mosaics that Demus sees as produced by Venetian artists are described as 'rustic'.
130. Demus, *The Church of San Marco*, writing in 1960, said that, before the establishment of glass manufacture in Venice, material for the mosaics was either brought from Constantinople or plundered from existing mosaics or imported from Tyre and other workshops in the Levant. Also see Demus, *The Mosaics of San Marco*, vol. 1, 26, 29, and vol. 2, 2 and n.7; 11 and n.823; 211. Also discussion in James, 'Mosaic matters'.
131. M. Verità and S. Rapisarda, 'Studio analitico di materiali vitrei del XII–XIII secolo dalla Basilica di Monreale a Palermo', *Rivista della Stazione sperimentale del vetro* 2 (2008), 15–29. Tesserae from a thirteenth- or fourteenth-century mosaic from Messina were opacified with either quartz or tin: R. Arletti, S. Quartieri, G. Vezzalini, G. Sabatino, M. Triscari and M. A. Mastelloni, 'Archaeometrical analyses of glass cakes and vitreous mosaic tesserae from Messina (Sicily, Italy)', *Journal of Non-Crystalline Solids* 354 (2008), 4962–9.
132. See, for example, Demus' discussion of the panel depicting the Agony in the Garden in S. Marco in *The Mosaics of San Marco*, vol. 2, 6–21.
133. H. Belting, 'Byzantine art among Greeks and Latins in southern Italy', *DOP* 28 (1974), 1–29.
134. L. Safran, *The Medieval Salento: Art and Identity in Southern Italy* (Philadelphia, 2014); A. Eastmond, 'On diversity in southern Italy', in eds. A. Cutler, F. Dell'Acqua, H. Kessler, A. Shalem and G. Wolf, *The Salerno Ivories: Objects, Histories, Contexts* (Berlin, 2016), 97–109.
135. Belting, 'Byzantine art'.

136. Fulcher of Chartres, *A History of the Expedition to Jerusalem*, book 3, ch. 37, 3; tr. F. R. Ryan (Tennessee, 1969), 271.
137. J. Prawer, *Crusader Institutions* (Oxford, 1980) on the Latin Kingdom as a colonial state.
138. W. Harvey, W. R. Lethaby, O. M. Dalton, H. A. A. Cruso and A. C. Headlam, *The Church of the Nativity at Bethlehem*, ed. R. Weir Schultz (London, 1910), with ch. 3, 31–51, on the mosaics, by O. M. Dalton. D. Pringle, *The Churches of the Crusader Kingdom of Jerusalem: A Corpus,* vol. 1*: A–K* (Cambridge, 1993), nos. 61–3, pp. 137–56. J. Folda, *The Art of the Crusaders in the Holy Land 1098–1187* (Cambridge, 1995), 347–78. On the current restoration work: ed. C. Alessandri, *Journal of Cultural Heritage* 13.4 (2012), 'Supplement: The Church of the Nativity in Bethlehem: an interdisciplinary approach to a knowledge-based restoration', www.sciencedirect.com/science/journal/12962074/13/4/supp/S, including the articles by M. Bacci, G. Bianchi, S. Campana and G. Fichera, 'Historical and archaeological analysis of the Church of the Nativity', and by N. Santopuoli, E. Concina and S. Sarmati, 'The conservation of the Church of the Nativity in Bethlehem and the preliminary restoration project of the decorated surfaces'. M. Bacci, 'Old restorations and new discoveries in the Nativity Church, Bethlehem', *Convivium, Seminarium Kondakovianum Series Nova* 2.2 (2015), 6–59.
139. The Councils on the north wall, starting at the east, are: Ancyra, Antioch, Sardica, Gangrae, Laodicea and Carthage. Antioch, Sardica and a bit of Gangrae survive. On the south wall, starting at the east, are the seven Ecumenical Councils: Nikaea I, Constantinople I, Ephesos, Chalcedon, Constantinople II, Constantinople III, Nikaea II. Constantinople I and Chalcedon are complete; Ephesos and Constantinople III survive in parts. Nikaea II was unique in being inscribed only in Latin, but has now gone.
140. Written accounts make it apparent that there was a considerable number of images in the transepts, including the Nativity, Magi, Woman of Samaria, Betrayal, Passion and Ascension scenes, as well as images of the evangelists.
141. For the texts of these, see Pringle, *The Churches of the Crusader Kingdom*, vol. 1, 154–5.
142. H. Stern, 'Les représentations des conciles dans l'église de la Nativité à Bethléem', *Byzantion* 11 (1936), 101–52; H. Stern, 'Nouvelles recherches sur les images des conciles dans l'église de la Nativité à Bethléem', *CahArch* 3 (1948), 82–105; H. Stern, 'Encore les mosaïques de l'église de la Nativité à Bethléem', *CahArch* 9 (1957), 141–5, argued consistently for a seventh- and twelfth-century division on the basis of style.
143. Bacci, 'Old restorations and new discoveries', also noting (57 and n.136) that Marco Verità's analyses of the tesserae will support this. Earlier support for one twelfth-century campaign came from V. Tzaferis, 'The wall mosaics in the Church of the Nativity, Bethlehem', *Actes du XV Congrès international d'études byzantins, Athens 1976* (Athens, 1981), vol. 2B, 891–900; G. Kühnel, 'Neue Feldarbeiten zur musivischen und malerischen Ausstattung der Geburtsbasilika in Bethlehem', *Kunstchronik* 12 (1984), 503–13, and G. Kühnel, 'Das Ausschmückungsprogramm der Gedurtsbasilika in Bethlehem. Byzanz und Abendland im Königreich Jerusalem', *Boreas* 10 (1987), 133–49; L.-A. Hunt, 'Art and colonialism: the mosaics of the Church of the Nativity in Bethlehem (1169) and the problem of "Crusader" art', *DOP* 45 (1991), 69–85.
144. They are discussed above, Chapter 3, but see A. Cutler, 'Ephraim, mosaicist of Bethlehem: the evidence from Jerusalem', *Jewish Art* 12–13 (1986–87), 179–83; Hunt, 'Art and colonialism'.
145. For reasons why not, Folda, *The Art of the Crusaders*, 353.
146. For details, Hunt, 'Art and colonialism', 74 and n.33; for Venetian presence in the Latin Kingdom: D. Jacoby, 'New Venetian evidence on Crusader Acre', in eds. P. Edbury and J. Phillips, *The Experience of Crusading,* vol. 2*: Defining the Crusader Kingdom* (Cambridge, 2003), 240–56; also published as Study IV in D. Jacoby, *Travellers, Merchants and Settlers in the Eastern Mediterranean, Eleventh to Fourteenth Centuries,* (Farnham, 2014).
147. Cutler, 'Ephraim, mosaicist of Bethlehem', on the basis of the quality of the work. The manuscript Jerusalem Gr. Pat. cod. 57 has the entire text of the Bethlehem inscription naming Ephrem and gives the date very clearly.
148. Basil may or may not be the Basil mentioned in the Psalter of Queen Melisende – there are twenty years or more between the two. T. S. R. Boase 'The arts in the Latin Kingdom of Jerusalem', *Journal of the Warburg and Courtauld Institutes* 2 (1938), 1–21, at 15; Folda, *The Art of the Crusaders*, 352–3.
149. Hunt, 'Art and colonialism'; M. Rosen-Ayalon, 'Art and architecture in Ayyubid Jerusalem', *Israel Exploration Journal* 40 (1990), 305–14. Bacci, 'Old restorations and new discoveries', at 55–7, makes a similar point.
150. D. Knipp, 'Pattern and ornament in Siculo-Arabic ivory painting: the track leads to the Norman Principality of Antioch', in ed. Knipp, *Siculo-Arabic Ivories*, 199–222. Also see the discussion of M. Immerzeel, A. Jeudy and B. Snelders, 'A mixed company of Syrians, Saracens and Greeks. Artistic interaction in Middle Eastern Christian Art in the Middle Ages', in *ibid.* 223–53. Benjamin of Tudela, *The Itinerary of Benjamin of Tudela*, tr. M. N. Adler (London, 1907), 16 and 31. Glass may also have been made in Acre: see U. T. Holmes, 'Life among the Europeans in Palestine and Syria in the twelfth and thirteenth centuries', in ed. H. W. Hazard, *The Art and Architecture of the Crusader States*, vol. 4 of ed. K. M. Setton, *A History of the Crusades* (Madison, WI, 1977), 5 and n.15.
151. As Folda, *The Art of the Crusaders*, 13, points out, and as has been said frequently in the context of icon painting.

152. Hunt, 'Art and colonialism'. A. Keshman, 'Crusader wall-mosaics in the Holy Land. Gustav Kühnel's work in the Church of the Nativity in Bethlehem', *Arte medievale* 3 (2013), 257–70, sets out Kuhnel's case for an image of the Virgin and also his argument that the mosaics and paintings were all part of same plan, the 'Classical' Byzantine schema adapted for an Early Christian basilica, to the place and to the political situation. I would agree with all of this except the association with the 'Classical' Byzantine schema, which seems an irrelevance. S. Piazza, 'L'albero di Iesse nel XII secolo fra occidente e oriente: note sul perdito mosaic della basilica della Natività a Betlemme', *Hortus artium medievalium* 20.2 (2014), 763–71, suggests a Western origin for the Tree of Jesse.
153. Caliph Umar, 577–644, who visited Jerusalem in 637: Pringle, *The Churches of the Crusader Kingdom*, vol. 1, 138. This story echoes a story in a Muslim source about the church's preservation.
154. For sources and pilgrim accounts, see *ibid.* 137–57, 'Bethlehem'; Bacci, 'Old restorations and new discoveries', 37–51.
155. Folda, *The Art of the Crusaders*, 54.
156. Cutler, 'Ephraim, mosaicist of Bethlehem'.
157. For Manuel's relations with the Latins see P. Magdalino, *The Empire of Manuel I Komnenos* (Cambridge, 1993), 72–5, suggesting that it may have been the case that the emperors saw the kings of Jerusalem as accepting the formality of becoming a federate vassal state. For Magdalino, after the Egypt expedition, the kingdom became a reliable Byzantine satellite. A. Jotischky, 'Manuel Comnenos and the reunion of the churches: the evidence of the conciliar mosaics in the Church of the Nativity in Bethlehem', *Levant* 26 (1994), 207–24, in suggesting that the decoration presents a Byzantine cycle done to a 'strictly Byzantine iconography' in a Latin church, over-emphasises the Byzantine connection. F. van Tricht, *The Latin* Renovatio *of Byzantium: The Empire of Constantinople (1204–1228)* (Leiden, 2011), 432, suggests Byzantium was not terribly influential in Antioch in the reign of Manuel and that the Latin Kingdom of Jerusalem was always independent of Byzantium except between 1158 and 1180, when it was a satellite state dependent on Manuel.
158. D. Pringle, *The Churches of the Crusader Kingdom of Jerusalem: A Corpus,* vol. 3*: The City of Jerusalem* (Cambridge, 2007), no. 263, 6–72.
159. *Ibid.* 54–5; M. L. Bulst-Thiele, 'Die Mosaiken der "Auferstehungskirche" in Jerusalem und die Bauten der "Franken" im 12. Jahrhundert', *Frühmittelalterliche Studien* (1979), 442–73. For a date of 1140 for the Christ, and a discussion of it, see G. Kühnel, 'Das restaurierte Christusmosaik der Calvarienberg-Kapelle und das Bildprogramme der Kreuzfahrer', *Römische Quartalschrift* 92 (1997), 45–71; G. Kühnel, 'Between Jerusalem and Bethlehem: the dating of a newly-recovered tessera of Crusader mosaic decoration', *Jewish Art* 23/24 (1997/98), 151–7, who sees it as a 'tribute paid to Byzantine art, probably by a local artist' and 'stamped with provinciality'.
160. M. Rosen-Ayalon, 'Une mosaïque médiévale au St-Sépulchre', *Revue biblique* 83 (1976), 237–53: it includes gold tesserae.
161. M. Rosen-Ayalon, 'Art and architecture in Ayyubid Jerusalem', *Israel Exploration Journal* 40 (1990), 305–14, esp. 128; L. Korn, 'Ayyubid mosaics in Jerusalem', in eds. R. Hillenbrand and S. Auld, *Ayyubid Jerusalem: The Holy City in Context 1187–1250* (London, 2009), 377–87, suggesting that Crusader art and motifs could have inspired the design.
162. T. S. R. Boase, 'Mosaic, painting and minor arts', in ed. H. W. Hazard, *The Art and Architecture of the Crusader States*, vol. 4 of ed. Setton, *A History of the Crusades*, 119.
163. Tabor: this may have belonged to the twelfth century rather than to later rebuilding, see Boase, 'Mosaic, painting and minor arts', 110; Nazareth: *ibid.* 118, presumably on the basis of John Phocas' description of a scene of the Annunciation (for which see D. Pringle, *The Churches of the Crusader Kingdom of Jerusalem: A Corpus,* vol. 2*: L–Z* (Cambridge, 1998), 'Nazareth', 120), which sadly does not specify a medium.
164. Folda, *The Art of the Crusaders*, 17 and Bulst-Thiele, 'Die Mosaiken'.
165. M. Georgopoulou, 'Orientalism and Crusader art: constructing a new canon', *Medieval Encounters* 5 (1999), 289–321, makes the point that it is wrong to see boundaries between Crusader art and that of neighbouring Muslim states – she discusses two glass Ayyubid beakers with Christian scenes that she suggests were made by Muslims for Christians.
166. Immerzeel et al., 'A mixed company of Syrians, Saracens and Greeks'; D. Jacoby, 'Society, culture and the arts in Crusader Acre', Study V in *Travellers, Merchants and Settlers in the Eastern Mediterranean*, also suggests that the Latins happily appropriated any Christian forms, ignoring any specific faith belief. This was true especially with icons which were marketable goods: M. Vassilaki, 'Painters and painting in medieval Crete', in *Proceedings of the International Symposium: The Howard Gillman International Conferences II: 'Mediterranean Cultural Interaction'* (Tel Aviv, 2000), 147–62, and reproduced in M. Vassilaki, *The Painter Angelos and Icon-painting in Venetian Crete* (Farnham, 2009), 67–80.

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1. For Cefalù see M. J. Johnson, 'The lost royal portraits of Gerace and Cefalù cathedrals', *DOP* 53 (1999), 237–62.
2. J. Gardner, *The Roman Crucible: The Artistic Patronage of the Papacy, 1198–1304* (Munich, 2013), esp. chs. 10, 11 and 12; R. Brentano, *Rome before Avignon: A Social History of Thirteenth-century Rome* (London, 1974).

3. A. Iacobini, 'Est haec sacra principis aedes. The Vatican basilica from Innocent III to Gregory IX (1198–1241)', in ed. W. Tronzo, *St Peter's in the Vatican* (Cambridge, 2005), 48–63; Gardner, *The Roman Crucible*, also sees reference to thirteenth-century northern European architecture.
4. Andaloro/Romano C4, 298–301, dating the restorations to the second quarter of the twelfth century; Gardner, *The Roman Crucible*, 36.
5. Gardner, *The Roman Crucible*, 37–8.
6. *Ibid.* 222–3; O. Demus, *The Mosaics of San Marco in Venice*, 2 vols. in 4 (Chicago, 1984), vol. 2, 223 on links with Venice.
7. See the positions as set out by J. Gardner, 'Copies of Roman mosaics in Edinburgh', *Burlington Magazine* 115 (1973), 583–91.
8. *Regesta Honorii*, liber 2, epist. 864; see P. Pressuti, *Regesta Honorii Papae III* (Hildesheim, 1978), vol. 1, 173. Text also given by Gardner, *The Roman Crucible*, 219 and n.1.
9. W. Oakeshott, *The Mosaics of Rome* (London, 1967), who sees both. O. Demus, 'Bisanzio e la pittura a mosaic del Ducento a Venezia', in *Venezia e l'Oriente fra tardo mdioevo e Rinascimento* (Florence, 1966), 125–39. A. Monciatti, '"Pro musaico opera ... faciendo". Osservazioni sul comporre in tessere fra Roma e Firenze, dall'inizio a poco oltre la metà del XIII secolo', *Annali della Scuola normale superior di Pisa*, series 4, 2.2 (1997), 509–30, looks for evidence of Sicilian and Venetian mosaicists through style. In contrast, S. Sinding-Larsen, 'A walk with Otto Demus. The mosaics of San Marco, Venice and art-historical analysis', *ActaNorv* 8 (1992), 145–205, at 157, on Pope Honorius seeing himself as continuing a Roman tradition rather than a Venetian or Byzantine one.
10. Andaloro/Romano C5, 90–1.
11. Known as *marmorarii*, 'marble-workers'. The earliest recorded Cosmati work is that of Lorenzo in 1190, but this is unlikely to have been his first effort; the last recorded Cosmati was Deodato, known to have been active in 1303. On the Cosmati, see P. C. Claussen, *Magistri doctissimi Romani: die römischen Marmorkunstler des Mittelalters, Corpus Cosmatorum I* (Stuttgart, 1987); also D. Glass, *Studies on Cosmatesque Pavements* (Oxford, 1980).
12. O. Demus, 'The ciborium mosaics of Parenzo', *Burlington Magazine* 87 (1945), 238–44; Demus, *The Mosaics of San Marco*, vol. 2, 183.
13. None of these has been included in the maps, which stick to wall mosaics. J. Osborne, 'The tomb of Alfanus in S. Maria in Cosmedin, Rome, and its place in the tradition of Roman funerary monuments', *Papers of the British School at Rome* 51 (1983), 240–7.
14. It is now in S. Michele in Vico. The slab is 164.5 × 74.5 cm and the mosaic on it is 136 × 47.5 cm. Andaloro/Romano C5, 262–4; J. Gardner, 'The Capocci Tabernacle in Sta Maria Maggiore', *Papers of the British School at Rome* 38 (1970), 220–30; Gardner, *The Roman Crucible*, 113, says 1256.
15. It also looks restored. A. Tomei, 'Un frammento ritrovato dal mosaic del monument di Bonifacio VIII in San Pietro', *Arte medievale* 10 (1996), 123–31; F. Toker, 'Arnolfo di Cambio and the beginnings of artistic identity' and J. Gardner, 'Arnolfo di Cambio: from Rome to Florence', both in eds. D. Friedman, J. Gardner and M. Haines, *Arnolfo's Moment* (Florence, 2009), 11–33 and 141–57 respectively.
16. Gardner, *The Roman Crucible*, 9.
17. Where the glass used is said to have been north European: Gardner, *The Roman Crucible*, 82, which raises interesting questions about the extent of glass-making in northern Europe at this time and its possible use in mosaics.
18. Andaloro/Romano C5, 113–16; identified by Gardner, *The Roman Crucible*, 228, as Roman and Romanesque. Also see C. Harding, 'Dissent, dissatisfaction and papal self-fashioning. Pope Gregory IX's response to the 13th century reform movement in his façade mosaics of San Pietro in Vaticano', *RACAR* 22 (1995), 29–39.
19. Andaloro/Romano C5, 133–5.
20. Andaloro/Romano A1, 225–30. For Nicholas as the patron (rather than Honorius as suggested in e.g. Oakeshott, *The Mosaics of Rome*, 297–8, who also suggests that the designer was Byzantine – both 'fastidious' and 'mannered'), see J. Gardner, 'Nicholas III's Oratory of the Sancta Sanctorum and its decoration', *Burlington Magazine* 115 (1973), 283–94; Gardner, *The Roman Crucible*, 246–7. Also M. Andaloro, 'I mosaici del *Sancta Sanctorum*', in ed. S. Romano, *Sancta Sanctorum* (Milan, 1995), P.
21. See Gardner, *The Roman Crucible*, 259–60. For earlier mosaic work on the façade (*c.* 1180–1200), see I. Herklotz, 'Der Campus Lateranensis im Mittelalter', *Römisches Jahrbuch für Kunstgeschichte* 22 (1985), 1–41, and 'Der mittelalterliche Fassaden portikus der Lateranbasilika und seine Mosaiken', *Römische Jahrbuch für Kunstgeschichte* 25 (1989), 25–95, drawing close connections between exterior spaces, portico mosaics and papal ceremonial. Also important is P. C. Claussen, *Die Kirchen der Stadt Rom im Mittelalter 1050–1300,* vol. 2: *S. Giovanni in Laterano* (Stuttgart, 2008).
22. Gardner, *The Roman Crucible*, 259–60.
23. *Ibid.* 257–9; Y. Christe, 'À propos du décor absidal de St-Jean du Lateran à Rome', *CahArch* 29 (1970), 197–206; A. Tomei, *Iacobus Torriti pictor: una vicenda figurative del tardo Duecento romano* (Rome, 1990), 79–98; A. Tomei, 'Nuovo acquisizioni per Jacopo Torriti a S. Giovanni in Laterano', *Arte medievale* 1 (1987), 183–204.
24. For the head as older and mounted on a separate block embedded in the vault see D. Cooper and J. Robson, *The Making of Assisi: The Pope, the Franciscans and the Painting of the Basilica* (New Haven, 2013), 23, and on the mosaic more generally, 23–7. Gardner, *The Roman Crucible,* 249 (citing Gardner, 'Nicholas III's Oratory', 288), says it is not true and that the head of Christ is not set on a separate piece of stone. See also Andaloro/Romano C1, 358.

25. The case is well made by C. Bolgia, 'Mosaics and gilded glass in Franciscan hands: "professional" friars in thirteenth- and fourteenth-century Italy', in eds. P. Binski and E. A. New, *Patrons and Professionals in the Middle Ages: Proceedings of the 2010 Harlaxton Symposium*, Harlaxton Medieval Studies 22 (Donington, 2012), 141–66, esp. 159–64 and n.71, who also discusses Iacopo da Camerino and his Franciscan connections. Tomei, *Iacobus Torriti Pictor*; V. Pace, 'Per Jacopo Torriti, frate, architetto e *pictor*', *Mitteilungen des Kunsthistorischen Institutes in Florenz* 40 (1996), 212–22.
26. For St Peter's as Orsini, J. Gardner, 'Pope Nicholas IV and the decoration of Santa Maria Maggiore', *Zeitschrift für Kunstgeschichte* 36 (1973), 1–50, at 2 and n.19.
27. On the façade and its dates, see Gardner 'Pope Nicholas IV', 6; E. Thunø, 'The dates of the façade mosaics of S. Maria Maggiore in Rome', *Analecta Romana Instituti Danici* 23 (1996), 61–82.
28. Gardner, 'Pope Nicholas IV', 10–12.
29. *Ibid.* 10–12 and Gardner, *The Roman Crucible*, ch. 9, 209–17 and 263–4.
30. These mosaics were destroyed in the seventeenth century. Gardner, 'Pope Nicholas IV' and fig. 18; N. Piano, 'I mosaici absidale esterni di S. Maria Maggiore a Roma e la porta del Presepe alla luce dell'epigrafia e della liturgia di Natale: "Introit in atria eius, adorate dominum in aula sancta eius"', *Arte medievale* 4 (2005), 59–68.
31. Gardner, 'Pope Nicholas IV', 22–5, and also 'Copies of Roman mosaics'. For the Colonna, see P. Binski, 'Art-historical reflections on the fall of the Colonna', in eds. C. Bolgia, R. McKitterick and J. Osborne, *Rome across Time and Space: Cultural Transmissions and the Exchange of Ideas, c. 500–1400* (Cambridge, 2011), 278–90, at 281–3 on S. Maria Maggiore, and S. Romano, 'I Colonna a Roma: 1288–1297', in ed. S. Carocci, *La nobilità romana nel medioevo* (Rome, 2006), 291–312.
32. J. Gardner, 'Bizuti, Rusuti, Nicolaus and Johannes: some neglected documents concerning Roman artists in France', *Burlington Magazine* 129 (1987), 381–3. Gardner, 'Pope Nicholas IV', argues for their completion by mid-1297. Also see J. Gardner, 'French patrons abroad and at home: 1260–1300', in eds. Bolgia et al., *Rome across Time and Space*, 265–77, and Binski, 'Art-historical reflections', 279–80.
33. Bolgia, 'Mosaics and gilded glass'; Cooper and Robson, *The Making of Assisi*, 21–2.
34. Cooper and Robson, *The Making of Assisi*, 12; also R. Brooke, *The Image of St Francis* (Cambridge, 2006), 448–51.
35. Gardner, *The Roman Crucible*, 248, says that in the crossing vault at S. Francesco in Assisi, mosaic was originally used on the keystone.
36. A. Tomei, *Pietro Cavallini* (Milan, 2000); P. Hetherington, 'The mosaics of Pietro Cavallini in Santa Maria in Trastevere', *Journal of the Warburg and Courtauld Institutes* 33 (1970), 84–106; P. Hetherington, *Pietro Cavallini: A Study in the Art of Late Medieval Rome* (London, 1979), reviewed with hostility by J. Gardner in *Burlington Magazine* 122 (1980), 25–58; V. Tiberià, *I mosaici del XII secolo e di Pietro Cavallini in Santa Maria in Trastevere: restauri e nuove ipotesi* (Todi, 1996).
37. W. Tronzo, 'Apse decoration, the liturgy and the perception of art in medieval Rome: S. Maria in Trastevere and S. Maria Maggiore', in ed. W. Tronzo, *Italian Church Decoration of the Middle Ages and Early Renaissance: Functions, Forms and Regional Traditions* (Bologna, 1989), 167–93.
38. Gardner, *The Roman Crucible*, 275, who points out that Rusuti offers abundant documentation for Roman mosaic workers in France but no mosaic work there; F. Toker, 'Arnolfo di Cambio and the beginnings of artistic identity', in eds. D. Friedman, J. Gardner and M. Haines, *Arnolfo's Moment* (Florence, 2009), 23.
39. Figures from C. Hydes, 'Italian mosaic art 1270–1529', unpublished PhD thesis, University of Sussex, 2016. I am very grateful to Carol Hydes for allowing me to use this information, which is done with her full knowledge.
40. Vasari, *Le vite*; at 331, Vasari calls this mosaicist a 'Greek', but this is probably, as Milanesi notes, 340–1, because he worked in a 'Greek' tradition rather than because he was Greek.
41. *Ibid.*; 'Dell'architettura', section 6, 331 and 'De pittura', 15, VI, 33.
42. Hetherington, *Pietro Cavallini*, and Gardner's review, *Burlington Magazine* 122 (1980), 255–8.
43. Or workshop. For a discussion of Cavallini's mosaics as moving away from what he perceives as the characteristics of medieval mosaics, see P. Hills, *The Light of Early Italian Painting* (New Haven, 1987), 29–40. There may also have been further work done on the façade in the thirteenth or fourteenth century: for the various dates attributed to the different bits of the façade (1220s–30s; 1230s–40s; 1280s), see Andaloro/Romano C5, 72–6 and 311–12.
44. Oakeshott, *The Mosaics of Rome*, 311.
45. Andaloro/Romano C4, 77–87 (S. Paolo *fuori le mura*), 92–3 (S. Lorenzo *fuori le mura*).
46. S. de Blaauw, 'Reception and renovation of Early Christian churches in Rome, c1050–1300', in eds. Bolgia et al., *Rome across Time and Space*, 151–66, dates the Lateran transept to 1130s, not to Nicholas IV.
47. J. T. Wollesen, *Pictures and Reality: Monumental Frescoes and Mosaics in Rome around 1300* (New York, 1998).
48. C. Harding, 'Façade mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio', unpublished PhD thesis, University of London, 1983.
49. J. Najemy, 'The beginnings of Florence cathedral. A political interpretation', in eds. Friedman et al., *Arnolfo's Moment*, 183–210.
50. Ed. A. Paolucci, *Il Battistero di San Giovanni a Firenze*, 2 vols. (Modena, 1994). I have not included any pictures from the Florence Baptistery because they are excessively expensive to get permission to use.
51. L. A. Koch, 'The Early Christian revival at S. Miniato al Monte: the Cardinal of Portugal chapel', *Art Bulletin* 78 (1996), 527–55.

52. Lucca: Harding, 'Façade mosaics', 220–4. Genoa: C. di Fabio, 'Il mosaic di San Matteo e tracce per l'arte musiva a Genova nel medioevo', in eds. F. Guidobaldi and A. G. Guidobaldi, *AISCOM* 3 (Bordighera, 1996), 63–80. Spoleto: a reference of 1207 to an artist of the mosaic façade of Spoleto Cathedral described him as 'Doctor Solsternus hac summus in arte modernus', 'most modern in this art': Bolgia, 'Mosaics and gilded glass', 146; M. Andaloro, 'Il mosaic di Solsterno', in eds. G. Benazzi and G. Carbonaro, *La Cattedrale di Spoleto: storia, arte, conservazione* (Milan, 2002), 213–19.
53. A. Braca, *Il Duomo di Salerno: architettura e culture artistiche del medioevo e dell'età moderna* (Salerno, 2003), 115–26.
54. A. Carucci, *Un mosaico orientale a Salerno tra storia, arte e liturgia* (Salerno, 1997).
55. C. Rizzardi, *Mosaici altoadriatici: il rapporto artistico Venezia–Bisanzio–Ravenna in età medievale* (Ravenna, 1985); R. Polacco, 'I mosaici della cattedrale di S. Giusto a Trieste', *Ateneo veneto* 24 (1986), 81–92; M. Mirabella Roberti, *La cattedrale di S. Giusto e il Colle Capitolino* (Trieste, 1991); M. Mason, 'Le maestranze bizantine dei mosaici absidali di San Giusto a Trieste: materiali e contesti', in eds. C. Angelilli and C. Salvetti, *AISCOM* 15 (Rome, 2009), 269–78. On the restorations, G. Bernardi, 'I restauri dei mosaici della cattedrale di S. Giusto a Trieste', in eds. F. Guidobaldi and A. G. Guidobaldi, *AISCOM* 3 (Bordighera, 1996), 205–18.
56. British Library, Cod. Cotton Otho B VI; O. Demus, 'A renascence of Early Christian art in thirteenth-century Venice', in eds. K. Weitzmann et al., *Late Classical and Mediaeval Studies in Honor of A. M. Friend, Jr.* (Princeton, 1955), 348–61; Demus, *The Mosaics of San Marco*, vol. 2, ch. 4; E. Kitzinger, 'The role of miniature painting in mural decoration', in ed. K. Weitzmann, *The Place of Book Illumination in Byzantine Art* (Princeton, 1975), 99–142. H. L. Kessler, 'The Cotton Genesis and Creation in the San Marco mosaics', *CahArch* 53 (2009), 17–32. On the Cotton Genesis at S. Marco and its employment as a boost to Venetian claims to apostolic heritage, see K. Weitzmann, 'The Genesis mosaics of San Marco and the Cotton Genesis miniatures', in Demus, *The Mosaics of San Marco*, vol. 2, 105–42; M. Belozerskaya and K. Lapatin, 'Antiquity consumed. Transformations at San Marco, Venice', in eds. A. Payne, A. Kuttner and R. Smick, *Antiquity and its Interpreters* (Cambridge, 2000), 83–95. Also see P. H. Jolly, *Made in God's Image? Adam and Eve in the Genesis Mosaics at San Marco, Venice* (Stanford, 1997).
57. M. Georgopoulou, *Venice's Mediterranean Colonies: Architecture and Urbanism* (Cambridge, 2001).
58. D. Pincus, 'Venice and the two Romes: Byzantium and Rome as a double heritage in Venetian cultural politics', *Artibus et historiae* 26 (1992), 101–14.
59. D. Jacoby, 'Les Vénitiens naturalisés dans l'empire byzantine: un aspect de l'expansion de Venise en Romanie du XIII au milieu du XV siècle', *Travaux et mémoires* 8 (1981), 217–35. M. Muraro, 'Varie fasi di influenza bizantina a venezia nel trecento', *Thesaurismata* 9 (1972), 180–201.
60. D. Howard, *Venice and the East: The Impact of the Islamic World on Venetian Architecture 1100–1500* (New Haven, 2000), sees resemblances between the atrium mosaics and Islamic mosaics and wonders if there is a link there.
61. Demus, *The Mosaics of San Marco*, vol. 2, 2.
62. *Regesta Honorii*, Liber 2, epist. 864; see Pressuti, *Regesta Honorii*, vol. 1, 173. For the sacked mosaicists, Bingo and Pazzo, see A. M. Giusti, 'The chancel mosaics', in ed. A. Paolucci, *Il Battistero di S. Giovanni a Firenze/The Baptistery of S. Giovanni, Florence* (Modena, 1994), 268, and 'The vault mosaics', in *ibid.* 283 (for the text, dated to 1301).
63. Demus, *The Mosaics of San Marco*, vol. 2, 164 and 222; document in F. Ongania, *Documenti per la storia dell'augusta ducale Basilica di San Marco in Venezia: dal nono secola sino alla fine del decimo ottavo dall'Archivio di Stato e dalla Biblioteca marciana in Venezia* (Venice, 1886), no. 96, p. 12. On Venetian hanging on to workmen, L. Mola, 'States and crafts: relocating technical skills in Renaissance Italy', in eds. E. S. Welch and M. O'Malley, *The Material Renaissance* (Manchester, 2007), 133–53.
64. Ed. C. L. Striker and Y. Doğan Kuban, *Kalenderhane in Istanbul: The Buildings, their History, Architecture, and Decoration: Final Reports on the Archaeological Exploration and Restoration at Kalenderhane Camii, 1966–1978* (Mainz, 2007), 126–7: it is worth noting for the sake of completeness that paint is used in the hands of the archangel.
65. F. van Tricht, *The Latin* Renovatio *of Byzantium: The Empire of Constantinople (1204–1228)* (Leiden, 2011), though he argues that Constantinople did not suffer as badly as has been supposed; D. Jacoby, 'The economy of Latin Constantinople 1204–1261', Study VII in *Travellers, Merchants and Settlers in the Eastern Mediterranean, Eleventh to Fourteenth Centuries* (Farnham, 2014); D. Jacoby, 'The urban evolution of late Constantinople (1204–1261)', in ed. N. Necipoğlu, *Byzantine Constantinople: Monuments, Topography and Everyday Life* (Leiden, 2001), 277–97.
66. V. Kidonopoulos, 'The urban physiognomy of Constantinople from the Latin Conquest through the Palaiologan era', in ed. S. T. Brooks, *Byzantium: Faith and Power (1261–1557): Perspectives on Late Byzantine Art and Culture* (New York, 2006), 101.
67. Striker and Kuban, *Kalenderhane in Istanbul*, 126 for the mosaic; 142 for the Francis frescoes and their date.
68. R. Janin, *La géographie ecclésiastique de l'empire byzantin: le siège de Constantinople et le patriarcat œcuménique: les églises et les monastères* (Paris, 1953), 'François, St', 595–6. On the Franciscans and the Latin Empire more widely, see R. L. Wolff, 'The Latin Empire of Constantinople and the Franciscans', *Traditio* 2 (1944), 213–37.
69. K.-P. Matschke, 'Builders and building in Late Byzantine Constantinople', in ed. Necipoğlu, *Byzantine Constantinople*, 315–28; A. M. Talbot, 'Building activity in Constantinople under Andronicus II: the role of

women patrons in the construction and restoration of monasteries' in *ibid.* 329–43; also Talbot 'The restoration of Constantinople'; V. Kidonopoulos, *Bauten in Konstantinopel 1204–1328* (Wiesbaden, 1994); S. Kalopissi-Verti, 'Patronage and artistic production in Byzantium during the Palaeologan period', in ed. Brooks, *Byzantium: Faith and Power*, 76–97.

70. R. Macrides, 'The New Constantine and the New Constantinople – 1261?', *Byzantine and Modern Greek Studies* 6 (1980), 13–41.
71. Figures from Kidonopoulos, 'Urban physiognomy'.
72. Said by George Pachymeres, *History*: ed. I. Bekker, *De Michaele et Andronico Palaeologis libri tredecim* (Bonn, 1835), vol. 1, 517; Talbot, 'The restoration of Constantinople', 250.
73. Mentioned by Ruy Gonzalez de Clavijo, *Historia del gran Tamorlan y itinerarion y enarracion del viage y relacion de la embajada* (Madrid, 1782) and tr. in C. Mango, *Art of the Byzantine Empire: Sources and Documents* (Toronto, 1974), 218; A.-M. Talbot 'The restoration of Constantinople under Michael VIII', *DOP* 47 (1993), 258; V. Marinis, 'Tombs and burials in the Monastery tou Libos in Constantinople', *DOP* 63 (2009), 147–66.
74. T. Whittemore, *The Mosaics of Haghia Sophia at Istanbul: Fourth Preliminary Report: Work Done in 1934–1938: The Deesis Panel of the South Gallery* (Oxford, 1952), 26–31. For the later date, R. Cormack, 'Interpreting the mosaics of S. Sophia at Istanbul', *Art History* 4 (1981), 145–6.
75. R. Cormack, 'The Mother of God in the mosaics of Hagia Sophia at Constantinople', in ed. M. Vassilaki, *Mother of God: Representations of the Virgin in Byzantine Art* (Milan, 2000), 120.
76. There are traces of an earlier image here, no later than the tenth century. Cormack, 'Interpreting the mosaics' and 'The Mother of God', thinks the panel was larger than Whittemore gave it credit for and dislikes his reconstruction.
77. R. Cormack, *Byzantine Art* (Oxford, 2000), 203.
78. Talbot, 'The restoration of Constantinople', 243–61: column discussed at 258–60; C. J. Hillsdale, *Byzantine Art and Diplomacy in an Age of Decline* (Cambridge, 2014), 121. For Genoa as a channel for artistic interchange also see E. H. Swift, 'The Latins at Hagia Sophia', *American Journal of Archaeology* 39 (1935), 458–74.
79. For Venetian glass but not Western mosaicists, see Cormack, 'The Mother of God', 121–2.
80. S. Kalopissi-Verti, 'Aspects of Byzantine art after the recapture of Constantinople (1261–c1300): reflections of imperial policy, reactions, confrontations with the Latins', in eds. J.-P. Caillet and F. Joubert, *Orient et Occident méditerranéens au XIII siècle* (Paris, 2012), 41–64.
81. A. A. M. Bryer and D. Winfield, *The Byzantine Monuments and Topography of the Pontos* (Washington, DC, 1985), vol. 1, no. 120, pp. 238–43, with the exterior and interior mosaics at 239.
82. H. Buchwald, 'Sardis Church E – a preliminary report', *Jahrbuch der österreichischen Byzantinistik* 26 (1977), 265–99; H. Buchwald and A. McClannan, *Churches Ea and E at Sardis* (Archaeological Exploration of Sardis Reports) (Cambridge, Mass., 2015).
83. For Epiros, see D. M. Nicol, *The Despotate of Epiros, 1267–1479: A Contribution to the History of Greece in the Middle Ages* (Cambridge, 1984); P. Magdalino, 'Between Romaniae: Thessaly and Epiros in the later Middle Ages', in eds. B. Arbel, B. Hamilton and D. Jacoby, *Latins and Greeks in the Eastern Mediterranean after 1204* (London, 1989), 87–110.
84. A. Orlandos, *Ē Parēgorētissa tēs Artēs* (Athens, 1963); V. N. Papadopoulou, *Byzantine Arta and its Monuments* (Athens, 2002), 131–61, figs. 177–8. For the patrons: S. Kalopissi-Verti, *Dedicatory Inscriptions and Donor Portraits in Thirteenth-Century Churches of Greece* (Vienna, 1992), no. A.7, 53–4, figs. 11–14.
85. There has been a lot of restoration and much has been lost. Orlandos, *Ē Parēgorētissa*, says that it is certain there was mosaic in the small tympanum below the vault over the bema – a small fragment with a bit of nimbus and hair survives – and probably elsewhere in the church. In the traditions of Demus and Kitzinger, Orlandos believes that the work of three mosaicists can be detected, and that the mosaics are not the best Constantinopolitan work.
86. A. Orlandos, 'E Porta-Panagia tēs Thessalias', *Archeion tōn Byzantinōn Mnēmeiōn tēs Hellados* 1 (1935), 5–40. More recently, M. Vassilaki, 'The absence of glass. Talking about the mosaics at Porta Panaghia in Thessaly', in eds. C. Entwistle and L. James, *New Light on Old Glass: Recent Research on Byzantine Mosaics and Glass* (London, 2012), 229–33.
87. S. Mamaloukos, 'The chronology of the exonarthex of the Porta-Panagia in Thessaly', in ed. I. Stevović, *ΣΥΜΜΕΙΚΤΑ: Collection of Papers Dedicated to the 40th Anniversary of the Institute for Art History, Faculty of Philosophy, University of Belgrade* (Belgrade, 2012), 237–49.
88. N. Chatzidakis, *Byzantine Mosaics* (Athens, 1994), 25, nos. 162–3, pls. 162–4, and Vassilaki, 'The absence of glass'.
89. Vassilaki, 'The absence of glass'.
90. E. Kenney, 'Mixed metaphors: iconography and medium in Mamluk glass mosaic decoration', *Artibus Asiae* 66 (2006), 175–200, gives a valuable survey of Mamluk glass mosaics and a full set of images.
91. P. Irwin, *The Middle East in the Middle Ages: The Early Mamluk Sultanate 1250–1382* (Carbondale, IL, 1986); J. Waterson *The Knights of Islam: The Wars of the Mamluks* (London, 2007).
92. C. Harding and N. Micklewright, 'Mamluks and Venetians: an intercultural perspective on fourteenth-century material culture in the Mediterranean', *RACAR* 24 (1997), 47–66.
93. Figures from N. Rabbat, *Mamluk History through Architecture: Monuments, Culture and Politics in Medieval Egypt and Syria* (London, 2010).
94. On the mihrab, see ed. A. Papadopoulo, *Le miḥrāb dans l'architecture et la religion musulmanes* (Leiden, 1988).

There is also perhaps a question of whether these are seen as 'mosaic' or 'inlay'.

95. Though see F. B. Flood, 'Umayyad survivals and Mamluk revivals: Qalawunid architecture and the Great Mosque of Damascus', *Muqarnas* 14 (1997), 66, for arguments that the mosaic postdates the tomb and is a later Qalawunid addition.
96. N. Rabbat, 'The mosaics of the Qubba al-Zahiriyya in Damascus: a classical Syrian medium acquires a Mamluk signature', *ARAM* 9–10 (1997–98), 227–39; Rabbat, *Mamluk History through Architecture*. Also B. J. Walker, 'Commemorating the sacred spaces of the past: the Mamluks and the Umayyad mosque at Damascus', *Near Eastern Archaeology* 67 (2004), 26–39.
97. R. Hillenbrand, *Islamic Architecture: Form, Function and Meaning* (Edinburgh, 1994), 417, 437–8. For the Beirut palace, J. Folda, *The Art of the Crusaders in the Holy Land, 1098–1187* (Cambridge, 1995), 526.
98. Flood, 'Umayyad survivals', 67: the citadel palace: a building identified either as Qa'a al-Ashrafiyya or Qasr al-Ablaq. On Cairo, D. Behrens-Abouseif, *Cairo of the Mamluks* (London and New York, 2007).
99. C. Williams, 'The mosque of Sitt Hadaq', *Muqarnas* 11 (1994), 55–64.
100. This is what Williams, 'The mosque of Sitt Hadaq', suggests.
101. M. H. Burgoyne, *Mamluk Jerusalem* (London, 1987), 235.
102. Flood, 'Umayyad survivals'; Walker, 'Commemorating the sacred spaces'.
103. For unsuccessful imitation M. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque in Damascus', in K. A. C. Creswell, *Early Muslim Architecture,* vol. 1*: Umayyads, AD 622–750* (second edition, Oxford, 1969), part 1, 314, 331, on Baybars' own tomb and his restorations of the Dome of the Rock and the Great Mosque; for deliberate archaism and wider interest, Flood, 'Umayyad survivals'. The Qa'a is described in Rabbat, 'The mosaics of the Qubba al-Zahiriyya' and his *The Citadel of Cairo: A New Interpretation of Royal Mamluk Architecture* (Leiden, 1995).
104. Rabbat, 'The mosaics of the Qubba al-Zahiriyya'.
105. Rabbat, *Mamluk History*, 35, discusses the debates about terminology and over the term *muzawwiq* which may mean 'mosaicists' as suggested in the context of the al-Aqsa Mosque and its Fatimid inscription of 1035; for Muslim artists as skilled across various crafts, see J. W. Allan, 'Muhammad ibn al-Zain: craftsman in cups, thrones and window grilles?', *Levant* 28 (1996), 199–208.
106. See the summary by J. M. Bloom, *Arts of the City Victorious: Islamic Art and Architecture in Fatimid North Africa and Egypt* (New Haven, 2007), 81–3.
107. Rabbat, 'The mosaics of the Qubba al-Zahiriyya'.
108. Gautier-van Berchem, 'The mosaics of the Dome of the Rock in Jerusalem and the Great Mosque', 237.

13 BOOM AND BUST

1. R. Janin, *La géographie ecclésiastique de l'empire byzantin: les églises et les monastères des grands centres byzantins: Bithynie, Hellespont, Latros, Galèsios, Trébizonde, Athènes, Thessalonique* (Paris, 1975), 346, makes the otherwise unsubstantiated claim that the church of Hagia Aikaterina in Thessaloniki had mosaics.
2. D. Pincus, 'Venice and the two Romes: Byzantium and Rome as a double heritage in Venetian cultural politics', *Artibus et historiae* 26 (1992), 101–14. H. Belting, 'Dandolo's dreams: Venetian state art and Byzantium', in ed. S. T. Brooks, *Byzantium: Faith and Power (1261–1557): Perspectives on Late Byzantine Art and Culture* (New York, 2006), 138–53.
3. O. Demus, 'Probleme der restaurierung der Mosaiken von San Marco im XV and XVI. Jahrhundert', in eds. H.-G. Beck, M. Manoussacas and A. Pertusi, *Venezia: centro di mediazione tra Oriente e Occidente (secoli VX–XVI): aspetti e problemi* (Florence, 1977), vol. 2, 633–49: this also discusses the influence of the mosaics on fifteenth- and sixteenth-century Venetian painting. For the Zeno Chapel, see P. J. Nordhagen, 'Byzantium and the West, with some remarks on the activity of Greek mosaic artists in Italy in the fourteenth century', in ed. R. Zeitler, *Les pays du Scandinavie et Byzance* (Uppsala, 1981), 345–51. On later work, I. Andreescu-Treadgold, 'Calchi e cartoni e loro uso nell'ottocento a Venezia: il caso della seconda cupola di Giuseppe nell'atrio marciano', in eds. C. Angelelli, D. Massara and F. Sposito, *AISCOM* 21 (Rome, 2016), 159–71.
4. O. Demus, *The Mosaics of San Marco in Venice*, 2 vols. in 4 (Chicago, 1984), vol. 2.
5. E. Merkel, 'Problemi sui restauri dei mosaici marciani nel quattrocento e nel cinquecento', in eds. Beck et al., *Venezia*, vol. 2, 657–71.
6. M. Muraro, 'Varie fasi di influenza Bizantina a venezia nel trecento', *Thesaurismata* 9 (1972), 180–201; M. Muraro, 'The statutes of the Venetian "arti" and the mosaics of the Mascoli Chapel', *Art Bulletin* 43 (1961), 263–74, discusses (using style as the marker) the value of Byzantine art in fourteenth- and fifteenth-century Venice, and detecting five waves of Byzantine influence! L. Hamlett, 'The sacristy of San Marco, Venice: form and function illuminated', *Art History* 32 (2009), 458–84.
7. Demus, *The Mosaics of San Marco*, vol. 2, 642.
8. P. Humfrey, *The Altarpiece in Renaissance Venice* (New Haven, 1993).
9. S. Bettini, *Mosaici antichi di San Marco a Venezia* (Bergamo, 1944), 12, and A. Zorzi, *Venezia scomparsa* (Milan, 1972), vol. 2, ch. 1.
10. R. Goffen, 'Bellini, S. Giobbe and altar egos', *Artibus et historiae* 14 (1986), 57–70, esp. 60 and nn.17 and 19. Bellini used plain gold mosaicked apses in his Frari triptych of 1488, and altarpieces for S. Zaccharia (1505) and S. Giovanni Crisostomo (1513).

11. E. Merkel, 'I mosaici di San Marco visti e interpretati dalla communità di San Giorgio dei Greci in Venezia', in ed. C. A. Maltezou, *Il contributo veneziano nella formazione del gusto dei Greci* (Venice, 2001), 25–42, though I would disagree with much of this article.
12. R. Arletti, G. Vezzalini, C. Fiori and M. Vandini, 'Mosaic glass from St Peter's, Rome: manufacturing techniques and raw materials employed in late 16th-century Italian opaque glass', *Archaeometry* 53 (2011), 364–86.
13. See G. Milanesi, *Dell'arte del vetro pro musaico: tre trattarelli dei secoli XIV e XV ora per la prima volta pubblicati* (Bologna, 1864); L. Zecchin, *Vetro e vetrai di Murano*, 3 vols. (Venice, 1987–90); D. C. Watts and C. Moretti, *Glass Recipes of the Renaissance* (privately published, 2011). Also W. P. McCray, *Glassmaking in Renaissance Venice* (Aldershot, 1999).
14. F. C. Masi, 'Memoria dell'antico: ancora sui mosaici della scarsella del battistero fiorentino', *Arte medievale* 7 (2008), 41–8, sees Pisa as the cultural milieu of the workshop.
15. For Domenico and Davide Ghirlandaio as mosaicists see J. K. Cadogan, *Domenico Ghirlandaio: Artist and Artisan* (New Haven, 2000).
16. W. Haftmann, 'Ein Mosaik der Ghirlandaio-Werkstatt aus dem Besitz des Lorenzo Magnifico', *Mitteilungen des Kunsthistorischen Institutes in Florenz* 6 (1940–41), 98–108; Cadogan, *Domenico Ghirlandaio*, 138.
17. A. Tomei, 'Roma senza Papa: artisti, botteghe, committenti tra Napoli e la Francia', in ed. A. Tomei, *Roma, Napoli, Avignone* (Turin, 1996), 13–53. This article also discusses the *Navicella* in some detail.
18. A copy in oil done in 1628 said to be at full-scale is 7.4 × 9.9 metres but parts of the mosaic had been lost by then.
19. One, horribly restored, is in the Vatican Grottoes; the other, less tampered with, is in the church of S. Pietro Ispano in Boville Ernica. C. Kheel, 'Giotto's Navicella Byzantinised', *Art Bulletin* 68 (1986), 484–5.
20. J. Gardner, 'The Stefaneschi altarpiece: a reconsideration', *Journal of the Warburg and Courtauld Institutes* 37 (1974), 57–103, has text and translation of the obituary.
21. On the Jubilee, H. Kessler and J. Zacharias, *Rome 1300: On the Path of the Pilgrim* (New Haven, 2000). The *Navicella* is usually discussed in relation to the Stefaneschi altarpiece for light on Giotto's career as a painter: W. Kemp, 'Zum Programm von Stefaneschi-Altar und Navicella', *Zeitschrift für Kunstgeschichte* 30 (1967), 309–20; Gardner, 'The Stefaneschi altarpiece', saw Giotto as the supervisor of the *Navicella*, using the collaboration of a team of mosaicists. B. Kempers and S. de Blaauw, 'Jacopo Stefaneschi, patron and liturgist', *Overdruk uit Mededelingen Rome* 47 (1987), 83–114, disagreed, arguing that Stefanseschi was not important enough to put art into St Peter's until the 1330s, which would be too late for Giotto to work for him. J. Gardner, *The Roman Crucible: The Artistic Patronage of the Papacy, 1198–1304* (Munich, 2013), 292–302, revisits the issue. Also on Giotto and the *Navicella*, M. Andaloro, 'Giotto tradotto. A proposito del mosaic della Navicella', in eds. M. Andaloro, S. Maddalo and M. Miglio, *Frammente di memoria: Giotto, Roma e Bonifacio VIII* (Rome, 2009), 17–35; H. Köhren-Jansen, *Giotto's Navicella: Bildtradition, Deutung, Rezeptionsgeschichte* (Worms, 1993).
22. Proposed by Kempers and de Blaauw, 'Jacopo Stefaneschi'. Figures about the costs of art in M. O'Malley, *The Business of Art: Contracts and the Commissioning Process in Renaissance Italy* (New Haven, 2005), suggest that the prices in the obituary are inflated in the case of the altarpiece and the paintings of the tribuna, perhaps by a factor of five: potentially therefore the same is true of the mosaic.
23. A. Derbes and M. Sandona, 'Giotto past and present: an introduction', in eds. A. Derbes and M. Sandona, *The Cambridge Companion to Giotto* (Cambridge, 2004), 3, n.11 on 240.
24. By Benedetto da Maiano: see A. Nagel, 'Authorship and image-making in the monument to Giotto in Florence Cathedral', *RES* 53/54 (2008), 143–51.
25. See C. Bambach, *Drawing and Painting in the Italian Renaissance Workshop: Theory and Practice, 1300–1600* (Cambridge, 1999), 21.
26. M. Raneri, 'I mosaici staccato del Museo Regionale di Messina', *Scienza e beni cultura* 18 (2002), 69–77.
27. J. Gardner, 'Copies of Roman mosaics in Edinburgh', *Burlington Magazine* 115 (1973), 583–91, at 588; V. Lucherini, '1313–1320: il cosidetto Lello da Orvieto, mosaicista e pittore, tra committeza episcopale e committenza canonicale', in ed. R. Alcoy, *El Trecento en obres: art de Catalunya i art d'Europa al segle XIV* (Barcelona, 2007), 185–214; V. Lucherini, *La cattedrale di Napoli* (Rome, 2009); C. D'Alberto, 'Arte come strumento di propaganda: il mosaico di Sta Maria del Principo nel Duomo di Napoli', *Arte medievale* 7 (2008), 105–24. On Naples' use of outside artists, see C. Bruzelius, 'The labor forces south and north: workers and builders in the Angevin kingdom', in eds. D. Friedman, J. Gardner and M. Haines, *Arnolfo's Moment* (Florence, 2009), 107–21, who also says that Islamic workmen were employed in both Naples and Salerno.
28. The mosaic was destroyed in 1786. F. Bellato, *The Cathedral of San Martino in Lucca* (Lucca, 2006); also ed. A. Paolucci, *Il Battistero di San Giovanni a Firenze* (Modena, 1994), 333, 342.
29. R. P. Novello, 'I mosaici', in ed. A. Peroni, *Mirabilia Italiae: il Duomo di Pisa* (Modena, 1995), vol. 3, 136; eds. M. Burresi and A. Caleca, *Cimabue a Pisa* (Pisa, 2005), and esp. 238.
30. Documents are published by L. Fumi, *Il Duomo di Orvieto* (Rome, 1891) and some are discussed by C. Harding, 'The production of medieval mosaics: the Orvieto evidence', *DOP* 43 (1989), 73–102.
31. I take this list from C. Harding, 'Images of authority, identity, power: façade mosaic decoration in Rome during the late Middle Ages', *RACAR* 24 (1997), 15–27. At St Peter's it was the retrofaçade of S. Maria *in Turris* that was given a façade mosaic. Also see Catherine Harding's

invaluable but unpublished PhD thesis, 'Façade mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio', University of London, 1983.

32. P. Salonius, 'The cathedral façade: papal politics and religious propaganda in medieval Orvieto', in eds. E. J. Anderson, J. Farquhar and J. Richards, *Visible Exports/Imports: New Research on Medieval and Renaissance Art and Culture* (Cambridge, 2012), 125–39. Siena: C. Bertelli, 'The Last Judgement mosaic: Bohemian originality and the Italian example', in eds. F. Piqué and D. C. Stulik, *Conservation of the Last Judgement Mosaic, St Vitus Cathedral, Prague* (Los Angeles, 2004), 33; F. Fenzi, M. Mendera, M. P. Riccardi and P. A. Vigato, 'Tessere musive, "lingue" e "pizze" rinvenute nel Duomo di Siena', in eds. C. Angelilli and A. Paribeni, *AISCOM* 12 (Rome, 2007), 147–56.

33. *Epistola synodica patriarcharum orientalium*, VII, 8, quoted in C. Mango, *Art of the Byzantine Empire: Sources and Documents* (Toronto, 1974), 114.

34. Eds. Piqué and Stulik, *Conservation of the Last Judgement Mosaic*; E. Borsook, 'The materials and condition of the Last Judgement mosaic of Prague Cathedral', in ed. A. Tüskés, *Omnis creatura significans: Essays in Honour of Mária Prokopp* (Esztergom, 2009), 117–22.

35. Z. Hledikova, 'Charles IV's Italian travels: an inspiration for the mosaic?', in eds. Piqué and Stulik, *Conservation of the Last Judgement Mosaic*, 16–17, on Venice; Bertelli, 'The Last Judgement mosaic', 33–8.

36. Z. Všetečková, 'The iconography of the Last Judgement mosaic and its medieval context', in eds. Piqué and Stulik, *Conservation of the Last Judgement Mosaic*, 26, says cryptically that the chronicler described the façade as 'made in *opus graecorum*', which refers to a technique usually applied in decorating Italian and Byzantine churches.

37. Text cited in Všetečková, 'The iconography of the Last Judgement mosaic', 21; Hledikova, 'Charles IV's Italian travels', 11.

38. M. Kostílková, 'The Last Judgement Mosaic: the historical record, 1370–1910', in eds. Piqué and Stulik, *Conservation of the Last Judgement Mosaic*, 4.

39. Hledíková, 'Charles IV's Italian travels'.

40. Described by Nikephoros Kallistos Xanthopoulos: see N. Teteriatnikov, 'The image of the Virgin Zoodochos Pege: two questions concerning its origin', in ed. M. Vassilaki, *Images of the Mother of God: Perceptions of the Theotokos in Byzantium* (Aldershot, 2005), 225–38.

41. For this church see E. Mamboury, 'Les fouilles byzantines à Istanbul', *Byzantion* 13 (1938), 307–8; E. Mamboury, 'Les fouilles byzantines à Istanbul', *Byzantion* 21 (1951), 427–8; T. F. Mathews, *The Byzantine Churches of Istanbul: A Photographic Survey* (Philadelphia, 1976), 386–402; H. Belting, 'The style of the mosaics', in eds. H. Belting, C. Mango and D. Mouriki, *The Mosaics and Frescoes of St. Mary Pammakaristos* (Washington, DC, 1978), 97, for date of *c.* 1300. Also V. Kidonopoulos, 'The urban physiognomy of Constantinople from the Latin Conquest through the Palaiologan era', in ed. Brooks, *Byzantium: Faith and Power*, 107.

42. Eds. Belting et al., *The Mosaics and Frescoes of St. Mary Pammakaristos.*

43. A large portable mosaic icon of the Mother of God Pammakaristos, now in the Greek Patriarchate in Istanbul, is also said to be from this church.

44. See the discussion of D. Mouriki, 'The iconography of the mosaics', in eds. Belting et al., *The Mosaics and Frescoes of St. Mary Pammakaristos*, 43–69, esp. 47–8.

45. Belting, 'The style of the mosaics', 85 on.

46. For the Chora, see P. A. Underwood, *The Kariye Djami*, vols. 1–3 (New York, 1966) and vol. 4 (Princeton, 1975). R. Ousterhout, *The Art of the Kariye Camii* (London and Istanbul, 2002), is much much more than the guidebook it appears at first sight to be.

47. For discussions of the style, see O. Demus, 'The style of the Kariye Djami and its place in the development of Palaeologan art', in ed. Underwood, *Kariye Djami*, vol. 4, 107–60, which does what you would expect in setting up the idea of a 'Palaeologan Renaissance' with its 'refined colouring, mannered and conscious classical reminiscences'. Also Nordhagen, 'Byzantium and the West'. See the critique (albeit in similar terms) by Ø. Hjort, '"Oddities" and "refinements": aspects of architecture, space and narrative in the mosaics of the Kariye Camii', in ed. J. O. Rosenqvist, *Interaction and Isolation in Late Byzantine Culture* (Stockholm, 2004), 27–43; B. Kiilerich, 'Aesthetic aspects of Palaeologan art in Constantinople: some problems', in *ibid.* 11–26. S. E. J. Gerstel, 'The Chora parekklesion, the hope for a peaceful afterlife, and monastic devotional practices', in eds. H. A. Klein, R. G. Ousterhout and B. Pitarakis, *Kariye Camii yeniden/The Kariye Camii Reconsidered* (Istanbul, 2011),129–46.

48. For discussions about the iconographies and meanings of parts of the mosaic: N. Teteriatnikov, 'The place of the nun Melania (the Lady of the Mongols) in the Deesis programme of the inner narthex of Chora, Constantinople', *CahArch* 43 (1995), 163–80; R. S. Nelson, 'The Chora and the Great Church: intervisuality in fourteenth-century Constantinople', *Byzantine and Modern Greek Studies* 23 (1999), 67–73; R. S. Nelson, 'Taxation with representation. Visual narrative and the political field of the Kariye Camii', *Art History* 22 (1999), 56–82; R. H. Nelson, 'Heavenly allies at the Chora', *Gesta* 43 (2004), 31–40; H. Maguire, 'Rhetoric and reality in the art of the Kariye Camii', in eds. Klein et al., *Kariye Camii*, 57–94; R. Schroeder, 'Prayer and penance in the south bay of the Chora esonarthex', *Gesta* 48 (2009), 37–53.

49. R. G. Ousterhout, 'Reading difficult buildings: the lessons of the Kariye Camii', in eds. Klein et al., *Kariye Camii*, 95–128.

50. Andronikos himself may have commissioned mosaics for his palace: Nikephoros Gregoras, *History*; ed. and tr. J. L. van Dieten, *Rhomäische Geschichte = Historia Rhomaike [von] Nikephoros Gregoras: Ubers. und erlautert* (Stuttgart, 1973–[94]), 15, 24, 39. The repairs to Hagia Sophia may have included a scene of the Baptism in the north gallery: see C. Mango, *The Mosaics of St Sophia at Istanbul* (Washington, DC, 1962), 47–8. See also the discussion in Magdalino, 'Theodore Metochites', 179–80.

51. N. B. Teteriatnikov, 'The mosaics of the eastern arch of Hagia Sophia in Constantinople: program and liturgy', *Gesta* 52 (2013), 61–84, on the uncovering of the mosaics; also N. Teteriatnikov, 'The last Palaiologan mosaic program of St. Sophia: the dome and pendentives', *DOP* 69 (2016), 273–96.
52. See also Mango, *The Mosaics of St Sophia*, 66 ff., for a description of the work. 'John surnamed Peralta, one of the Latin subjects of the emperor': D. M. Nicol, *The Reluctant Emperor: A Biography of John Cantacuzene, Byzantine Emperor and Monk, c. 1295–1383* (Cambridge, 1996), 132, identifies this man as Juan de Peralta, a Catalan engineer and soldier. See also *Prosopographisches Lexikon der Palaiologenzeit* (Vienna, 1976–96), vol. 9, no. 22, 404. John Kantakuzenos, *Historiarum libri IV: Græce et latine*, ed. L. Schopeni (Bonn, 1828–32), book 4, 4, p. 30, also describes the repairs, giving himself most of the credit.
53. Mango, *The Mosaics of St Sophia*, 87–8, gives a translation of the passage and suggests that the figures are unlikely.
54. *Ibid.* 66–76. Teteriatnikov, 'The mosaics of the eastern arch', 68, suggests Helena, wife of John V.
55. R. Özil, 'The conservation of the dome mosaics of Hagia Sophia', in eds. G. Arsebük, M. J. Mellink and W. Schirmer, *Light on Top of the Black Hill: Studies Presented to Halet Çambel* (Istanbul, 1998), 543–9.
56. R. Ousterhout, 'Conceptualising the late churches of Constantinople: suggested methodologies and a few examples', *DOP* 54 (2000), 241–50.
57. See the discussion in P. Magdalino, 'Theodore Metochites, the Chora and Constantinople', in eds. Klein et al., *Kariye Camii*, 169–214.
58. For the Holy Apostles, Thessaloniki, see C. Stephan, *Ein byzantinisches Bildensemble: die Mosaiken und Fresken der Apostelkirche zu Thessaloniki* (Worms, 1986); N. Nikonanos, *The Church of the Holy Apostles in Thessaloniki* (Thessaloniki, 1998); eds. C. Bakirtzis, E. Kourkoutidou-Nikolaidou and C. Mavropoulou-Tsioumi, *Mosaics of Thessaloniki, Fourth to Fourteenth Century* (Athens, 2012), 296–353.
59. C. Bakirtzis and P. Mastora, 'Où sont-elles passés, les tesselles en verre et or? Le cas de l'église des Sts-Apôtres de Thessaloniki', in eds. O. Brandt and P. Pergola, *Marmoribus vestita: miscellanea in onore di Federico Guidobaldi* (Vatican City, 2011), vol. 1, 55–66.
60. O. Demus, 'The style of the Kariye Djami and its place in the development of Palaeologan art', in ed. Underwood, *Kariye Djami*, vol. 4, 150–6.
61. D. Mouriki, 'Stylistic trends in monumental painting of Greece at the beginning of the fourteenth century', in *L'art byzantin au début du XIV siècle* (Belgrade, 1978), 55–83; such movements can be traced to an extent in wall paintings, thanks in part to the appearance of artists' signatures: S. Kalopissi-Verti, *Dedicatory Inscriptions and Donor Portraits in Thirteenth-Century Churches of Greece* (Vienna, 1992); T. Gouma-Peterson, 'The frescoes of the parekklesion of St Euthymios in Thessaloniki: patrons, workshop and style', in eds. S. Ćurčić and D. Mouriki, *The Twilight of Byzantium: Aspects of Cultural and Religious History in the Late Byzantine Empire* (Princeton, 1991), 111–60.
62. S. E. J. Gerstel, 'Civic and monastic influences in church decoration in Late Byzantine Thessalonike', *DOP* 57 (2003), 225–39.
63. R. Cormack, *Byzantine Art* (Oxford, 2000), 210.
64. On the regional significance of this type of the Mother of God, R. Etzeoglu, 'The Virgin Zoodochos Pege at Mistra', in ed. M. Vassilaki, *Images of the Mother of God: Perceptions of the Theotokos in Byzantium* (Aldershot, 2005), 239–50.
65. R. Jones and N. Penny, *Raphael* (New Haven, 1983), 105, suggesting that Chigi was aware of the status of mosaic as both a classical and a medieval medium. The authors suggest a loss of expertise in mosaic by the fifteenth century but this would seem to me to be a consequence of a lack of demand rather than the other way round.
66. Gardner, *Roman Crucible*, 10, suggested that Gothic architecture did not affect painting in Italy until the later thirteenth century. He also discusses the importance of Rome in the development of wall painting, *ibid.* 392.
67. By Vasari, of course, the horrid toad.

IN CONCLUSION

1. For example, the eight-century Iconoclast emperor Constantine V's non-figural mosaics in the Blachernae church: *Vita St Stephen Iunioris*, ch. 29: ed. and tr. M.-F. Auzépy, *La Vie d'Etienne le Jeune par Etienne le Diacre* (Aldershot, 1997), 126–7 (text) and 221–2 (translation).
2. N. Schibille, 'Late Byzantine mineral soda high alumina glasses from Asia Minor: a new primary glass production group', *PLoS ONE* 6.4 (2011), http://dx.doi.org/10.1371/journal.pone.0018970 for evidence of primary glass production in post-eighth-century Byzantine Asia Minor.
3. J. Drauschke, 'Early Byzantine glass from Caričin Grad / Justiniana Prima (Serbia): first results concerning the composition of raw glass chunks', in eds. B. Zorn and A. Hilgner, *Glass along the Silk Road from 200 BC to AD 1000* (Mainz, 2010), 53–71.
4. D. M. Deliyannis, *Ravenna in Late Antiquity* (Cambridge, 2010).
5. A. Freeman and P. Meyvaert, 'The meaning of Theodulf's apse mosaic at Germigny-des-Prés', *Gesta* 40.2 (2001), 125–39.
6. Eds. W. Pohl, C. Gantne and R. Payne, *Visions of Community in the Post-Roman World: The West, Byzantium and the Islamic World, 300–1100* (Farnham, 2012).
7. E. R. Hoffman, 'Pathways of portability: Islamic and Christian interchange from the tenth to the twelfth century', *Art History* 24 (2001) 17–50, suggested this for objects but it was surely true of media as well.

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